AN EVALUATION OF A MINDFULNESS CURRICULUM ON TEACHER OUTCOMES IN A NONPUBLIC SPECIAL EDUCATION SETTING

by
Caitlin M. Gosnell

A dissertation submitted to Johns Hopkins University in conformity with the requirements for the degree of Doctor of Education

Baltimore, Maryland
November, 2017

Abstract

Teachers within special education settings experience high rates of stress, which can lead to burnout and make it difficult for teachers to proactively model social-emotional competencies and effectively manage their classrooms. A quasi-experimental study was conducted to evaluate the effects of a specific mindfulness-based social-emotional learning program for the classroom on teacher outcomes (i.e., mindfulness, emotional exhaustion and personal accomplishment). Mindfulness was measured using the Five Factor Mindfulness Questionnaire (FFMQ) and components of burnout were measured using the Maslach Burnout Inventory-Educator Survey (MBI-ES). A statistically significant effect was found for one subscale (Observe) of the FFMQ. No statistically significant effects were found for the rest of the FFMQ or the MBI-ES subscales. Despite these findings, participants regarded the program highly. Participants also identified some challenges to implementation of mindfulness in the classroom. A common challenge was that of time-related concerns, which reiterates the need to further examine the problem of teacher stress, as well as interventions, such as mindfulness, to support the problem.

Keywords: stress, special education, mindfulness, burnout, emotional exhaustion, personal accomplishment

Acknowledgements

Many thanks to those who have helped me throughout this doctoral program. I am especially grateful for the guidance, support, and patience that I received from Dr. Deborah Carran, as well as the ongoing support of Dr. Harriette Wimms, Dr. Tamara Marder, and Dr. Christine Eith. I am grateful for the continuous support received from Towanda Cofield, my executive sponsor. Most of all I am grateful for the unwavering support of my husband, our incredibly supportive family and a few close friends who have been with me every step of the way.

Dedication

This dissertation is dedicated to the individuals in my life who continuously inspire me. My grandparents, Victoria and John Savage, whose life and love of learning will always be a part of me. My husband, Brandon, who has continuously encouraged, loved, and supported me, and whose sense of humor is contagious. My mother, Susan, who has always been a model of hard work and service. My step-father, Randy, who has shown what it means to be resilient. My boys, Grayson and Finn, born on April 29, 2017, who motivate me to consistently strive to put forth my best self.

Table of Contents

List of Tables

List of Figures

EXECUTIVE SUMMARY

This study evaluated a mindfulness-based social-emotional learning curriculum for students on teacher outcomes of mindfulness and components of burnout. Initially, a problem of teacher stress within specific special education settings was observed by the researcher. After using available literature to theoretically explain stress and conceptualize teacher stress within the work place, a needs assessment was conducted to further understand the problem. Needs assessment findings confirmed that teachers across several private schools for students with mild to moderate special needs experience high levels of stress. Common classroom-based stressors reported included: student behavior, paperwork, time-related concerns, diverse student needs, and assessment. Many participants cited use of coping strategies at work such as, social supports (i.e., co-workers), relaxation strategies (i.e., music, movement, breathing), organizational strategies (i.e., making lists, creating schedules), taking breaks, and thinking strategies (i.e., self-talk, positive thinking). Following the needs assessment, the goal was to determine an additional way to support teachers' response to stress. An extensive literature review pointed to the intervention of mindfulness as a way to support teachers' by increasing their mindfulness abilities and potentially reducing their potential for burnout.

A study was conducted using a quasi-experimental pretest posttest control group design to determine the effects of the implementation of the MindUP program for students on teacher outcomes of mindfulness and components of burnout, Emotional exhaustion and Personal accomplishment. Fifteen teacher participants from two campuses completed the study, eight from treatment and seven from comparison. Mindfulness was

measured using the Five Factor Mindfulness Questionnaire, which assesses mindfulness overall and through five categories: Observe, Describe, Nonjudge, Nonreact, and Act with awareness. The Maslach Burnout Inventory- Educator Survey was used to measure Emotional exhaustion and Personal accomplishment. A significant interaction was found for the Observe subscale. No other statistically significant effects were found. Participant responses as part of Post-Satisfaction and Follow-up Surveys show that despite the findings, participants regarded the program highly. Through these surveys, participants also discussed challenges related to implementing daily mindfulness practice, a staple of the MindUP program. Time-related concerns were identified as a common challenge, which may suggest the need for future research around the issue of time-related concerns, as they relate to student behavior and teachers' experience of stress.

CHAPTER 1. PROBLEM OF PRACTICE AND LITERATURE REVIEW

Ideally, teachers would remain committed to long-term meaningful practice despite experiencing stress. However, when experiencing stress from various interpersonal and intrapersonal sources, it can be challenging for teachers to respond in a resilient way by use of productive coping strategies and the development of self-efficacy beliefs (Austin, Shah, & Muncer, 2005; Collie, Shapka, & Perry, 2012; Maslach, 2003). Teacher stress negatively influences job satisfaction (Billingsley, 2004) and overall well-being (Collie et al., 2012; Watson, Harper, Ratliff, & Singleton, 2010). Additionally, experience of stress, coupled with decreased self-efficacy beliefs, may lead to negative outcomes for teachers and students alike, such as decreased morale, decreased efficacy, and teacher attrition (Billingsley; Collie et al.). The goal of this chapter is to provide a theoretical explanation of teacher stress and coping, as well as to present data collected from a needs assessment to understand teacher stress within a specific special education context.

Context of the Problem

Teachers at a small, Baltimore-area private school for students with social and communication challenges have reported experiencing stress and decreased self-efficacy beliefs through informal and formal mentor meetings. Within this setting, teachers implement a rigorous academic curriculum with the simultaneous integration of social learning throughout each part of the school day in order to foster academic and social growth for students. Many of the students are diagnosed with an Autism Spectrum Disorder (ASD) or Pervasive Developmental Disorder- Not Otherwise Specified (PDD-NOS). While a diagnosis is not necessary for students to attend, a common thread among

students is experienced difficulty when making and keeping friends. Teachers strive to provide a positive and supportive environment for students while also teaching them strategies to meet success when navigating a complex social world.

Within this context, it may also be important to note that many students report negative past experiences in traditional school settings. Students may demonstrate great potential; however, there may be equally as many needs. Many students display scattered skills and may require significant remediation, whereas others need substantial enrichment. Some students require intense behavioral support. It can therefore be challenging for teachers to create and implement a demanding academic and social curriculum that meets varied individual academic, behavioral, and social challenges.

Theoretical Explanation of Stress

A variety of theoretical concepts can be utilized when creating a framework to better understand stress. Bandura's (1986) model of triadic reciprocal determinism provides an overarching framework to conceptualize the dynamic relationship between individual thought, individual behavior, and the environment. This model, taken into account with theories related to biological reactivity (Obradovi, Bush, Stamperdahl, Alder, & Boyce, 2010), appraisal (Lazarus, 1991), locus of control (Rotter, 1975) and the relationship between perceived demands and resources (Lambert, McCarthy, O'Donnell, & Wang, 2009) helps to facilitate a concrete understanding of an abstract and subjective concept.

Triadic Reciprocal Determinism

Bandura (1986) posits that people "…serve as a reciprocally contributing influence to their own motivation and behavior within a system of reciprocal causation

involving personal determinants, action, and environmental factors" (p.12). This cognitive perspective dynamically considers human behavior by asserting that individual thinking processes and the environment work together in a powerful way. The relationship between stress and response is not linear; rather it is a complex intermingling between individual thoughts and emotions, behavior, and environmental context, which informs perception and predicts future response (Bandura, 1986). Comprehending the complexity of internal emotional processing to external stimuli and associated behavioral response, as outlined through the theory of triadic reciprocal determinism, is critical to understanding stress (Bandura, 1986).

Biological Reactivity

Stress varies from individual to individual and is a matter of perception. As such, it is necessary to understand the role biology plays in the process of appraising and evaluating potential stressors. While many parts of the brain are involved in emotional processing, the amygdala, located in the media temporal lobe, acts as a fast track to process potential threat. The amygdala prompts an initial "fight or flight" reaction and is responsible for human thought and behavior in response to environmental stimuli (Obradovi et al., 2010; Phelps, 2006).

Phelps (2006) suggests, "Attention and perception are the first stages of stimulus processing and factors that influence these early processes will also influence downstream cognitive functions, such as memory and reasoning" (p.37). This in turn may impact future action to similar environmental stimuli. The way that an individual attends to or perceives various environmental stressors greatly influences thought, emotion, and overall experience of stress. Likewise, thought and emotional experience may impact

individual behavioral response (Phelps). Bandura's (1986) model of triadic reciprocal determinism illustrates that this is not a linear process, because behavior then influences thoughts and emotions, which inform perception of environmental stimuli (Bandura).

While there are multitudes of neural connections related to emotional response within the brain, it is worthwhile to consider the relationship between the amygdala, the autonomic nervous system (ANS), which creates a physiological stress response, and the hypothalamus-pituitary-adrenal (HPA) axis, with regard to stress. After the amygdala's "fight or flight" reaction prompts a physiological stress response, the HPA axis is activated and relevant stress hormones are released in an attempt to effectively manage the physiological symptoms. The presence of stress hormones, such as cortisol serves as an indicator of how the HPA axis is responding to the experience of stress (Obradovi et al., 2010; Ruttle, Shirtcliff, Serbin, Ben-Dat Fisher, & Stack, 2011).

While stress may conjure up negative associations, it is important to note that it is beneficial for people to experience some level of stress. The presence of increased stress hormones can prompt adaptive responses. However, exposure becomes problematic when individuals experience heightened states of stress over an extended duration of time or in an extreme way. Substantial or frequent release of stress hormones negatively impedes on overall health, as well as ability to respond to stress in an effective way (Joëls et al., 2004; Ruttle et al., 2011).

Appraisal Theory

Each person responds to stress differently on a biological level and the dynamic relationship between the individual, their behavior, and the environment is paramount. Cognitively, the emotional response solicited in reaction to a stressor, after individuals

have had time to think about the event, is based on primary and secondary appraisals, or evaluations, which inform perception (Chang, 2009). Lazarus (1991) asserts that through primary appraisals, an individual first considers relevance. This means that the individual considers whether the situation is harmful or helpful and potential negative or positive emotions associated, and their motivation to respond. Secondary appraisals involve assessing accountability in terms of whom or what is responsible, ability to cope with different emotional realities, and predicted future action (Lazarus, 1991).

Segerstrom and O'Connor (2012) suggest, "Appraisals of the demand of the event relative to one's resources and the degree of threat, harm, or challenge inherent in the situation determine whether an event is in fact experienced psychologically as stress" (p.129). With that said, appraisal theory emphasizes the role of individual perception of events instead of the event itself (Lazarus, 1991). Segerstrom and O'Connor (2012) propose the possibility of looking at both one's appraisal of an event and the context of the event itself, along with emotions evoked. As such, individuals evaluate the relevance and power of potential stressors through their own appraisal of the environment and their capabilities to effectively deal with a given situation (Siemer, Mauss, & Gross, 2007). It is critical to consider the subjective nature of stress related to individual appraisal of situations, which guides perception and response (Austin, et al., 2005; Lazarus).

Locus of Control and Perceived Demands/Resources

Bearing in mind the relationship between beliefs and outcomes, Rotter (1975) explained the difference between having an internal and external locus of control and the impact on beliefs and behavior. Rotter suggested "The nature of the reinforcement itself, whether positive or negative; the past history, sequence, and patterning of such

reinforcements; and the value attached to the reinforcement are obviously important and probably more crucial determinants of behavior" (p. 56-57). A person with an internal locus of control is much more likely to believe that he/she is capable of influencing external events. Conversely, a person with an external locus of control is likely to perceive events as happening to them or as outside of their control. Studied in conjunction with appraisal theory, perception of individual control concerning a given situation prompts motivation (or lack thereof) to respond (Rotter).

In an attempt to quantify the subjective experience of stress, Lambert et al. (2009) has suggested conceptualizing stress as the relationship between two categories: demands and resources. When perceived demands of an environment outweigh available resources, individuals react based on their personal resourcefulness or perceived ability to handle a given situation (Bandura, 1986; Lambert et al.). Whether an individual has an internal or external locus of control may affect their appraisal of perceived available resources in response to demands (Rotter, 1975).

Theoretical Application and Teacher Experience of Stress

Lewis, Roache, and Romi (2011) suggest that the ways in which teachers relate to stress and/or the coping strategies they use may alleviate the problematic stress or perpetuate it. It is necessary to recognize the substantial role that individual appraisal plays along with the environmental context of the classroom, when understanding teacher stress within a specific private special education school setting (Segerstrom & O'Connor, 2012). Within this study, the experience of stress for teachers will be examined briefly in terms of role conflict, autonomy, and specific classroom-based stressors- namely student behavior and classroom management.

Role Conflict

Within a growing private school for students with special needs, teachers often take on multiple roles. For example, beyond teaching in the classroom, teachers may be asked to serve on committees, act as mentors, or provide leadership support related to school growth or accreditation, which means teachers often juggle many responsibilities in addition to classroom teaching. Austin et al. (2005) found that major stressors for teachers come from increased demands with fewer resources than needed to meet those demands. They suggest, "…role overload or too many tasks with too little time is the main cause of stress for teachers" (Austin et al., p.74). Teachers can often experience substantial stress when: (a) expectations of roles are unclear, expectations interfere with an individual's primary role; (b) others' expectations are inconsistent with an individual's understanding of his or her role; (c) or expectations are unrealistic (Billingsley, 2004). Billingsley (2004) suggests, "…special educators who experience prolonged and excessive role problems are more likely to report greater stress, less job satisfaction, less commitment, and greater intent to leave than their colleagues with fewer role problems" (p.372). Considering individual perception of one's role within a specific context, along with whether that perception aligns with professional priorities is an important component to understanding teacher stress.

Autonomy

Administrative support and teacher involvement in decision-making are key components of teacher autonomy. Pearson and Moomaw (2005) found that when schools empower teachers professionally, results are positively associated with increased autonomy, satisfaction, and reduced stress. Autonomy means that teachers feel their

voices matter, they are respected members of the school community, and that they have the freedom to decide on the best instructional practices for their classroom (Pearson & Moomaw). If teachers do not receive administrative support, they may experience increased levels of stress, stemming from reduced autonomy. Additionally, if changes are imposed on teachers and they believe that they are powerless or that they are not supported, they may feel increasingly frustrated (Margolis & Nagel, 2006). A greater sense of autonomy connects to a stronger internal locus of control (Rock & Cox, 2012).

Classroom-based Stressors

Most relevant to context is the focus on classroom-based challenges. Classroom-based stressors, especially related to student behavior and classroom management have the potential to be a significant source of stress for teachers (Lambert et al., 2009). This is particularly true of special education environments, where these types of challenges can feel particularly overbearing and create further role conflict. If teachers feel pulled to focus attention on work-related demands disconnected from instruction and/or overall classroom engagement, then it may be difficult to effectively manage stress (Mehrenberg, 2013). Within the observed context of practice, teachers must be equipped to deal effectively with varying behavioral challenges in order to promote student growth across multiple domains.

Theoretical Application and Teacher Response to Stress

When conceptualizing response to stress, it is necessary to consider the complexity of stress itself. Response to stress is conceptualized in terms of coping, self-efficacy beliefs, and overall efficacy.

Coping

Folkman, Lazarus, Gruen, and DeLongis (1986) explain coping as "…the person's cognitive and behavioral efforts to manage (reduce, minimize, master, or tolerate) the internal and external demands of the person-environment transaction that is appraised as taxing or exceeding the person's resources" (p.572). When individuals consider a situation stressful they respond to that situation. Their behavioral response, which is a dynamic interaction between the individual and the environment, is how they cope with the stressor. According to Lewis et al., (2011) "Coping can thus mitigate or exacerbate psychological distress regardless of the stressors confronted" (p.56).

Individuals may utilize varying coping techniques, and the way they cope with a situation may vary depending on their appraisal of the stressor. Both positive and negative coping responses exist. However, those strategies that are productive, such as problem-solving based approaches, often have better, more positive outcomes. More avoidant coping responses typically lead to negative outcomes (e.g., burnout) (Lewis et al., 2011; Rice, 2001).

Austin et al., (2005) found that teachers who experience greater levels of stress were more likely to engage in coping strategies that increase their stress level. Because coping and stress interact with one another, it is beneficial to consider ways to support this relationship. Billingsley (2004) states, "Taking care of students with disabilities requires that care also be directed toward their teachers, what they do, and the complex and often difficult conditions in which they work" (p.371). Identifying how to best support teachers' experience of stress involves understanding how they relate to stress in terms of coping strategies and perceived resources available to help them engage in productive coping responses.

Self-Efficacy Beliefs

Bandura (1986) posits the following, "Among the types of thoughts that affect action, none is more central or pervasive than people's judgments of their capabilities to deal effectively with different realities" (p.21). Teacher self-efficacy beliefs based on Bandura's (1986) definition of self-efficacy are a reflection of one's belief in his or her own ability to produce an outcome, but not the outcome itself. When measuring self-efficacy beliefs, attention to contextual factors is important. Teachers can have different beliefs about their ability to engage in a variety of task-specific demands (Bandura, 1986).

Self-efficacy beliefs in response to stress have the most impact on job satisfaction and overall well-being (Collie, et al., 2012; Flook, Goldberg, Pinger, Bonus, & Davidson, 2013). Occupational burnout, according to Maslach (2003) "…is a psychological syndrome that involves prolonged response to stressors in the workplace" (p.189). Stress negatively influences the development of self-efficacy beliefs. Likewise, lowered self-efficacy beliefs affect personal response to stress. If one does not believe they have the power to alter their experience, they will be less motivated to try (Bandura, 1986; Maslach). Sandwiched in between stress, decreased self-efficacy beliefs, especially in the area of classroom management, are correlated with burnout (Maslach; Ruble, Usher, & McGrew, 2011).

Overall Efficacy

Teacher efficacy, in contrast to self-efficacy beliefs is outcome based. Therefore, when referring to overall efficacy, the focus is on the result or product, for example achievement test scores (Godard & Goddard, 2001). However, when establishing

classroom environments that produce positive student outcomes, it is necessary to understand a teacher's sense of efficacy (or self-efficacy beliefs). Self-efficacy beliefs, or a teacher's sense of efficacy, focus less on the outcome itself and more on an individual's perception about his or her ability to affect an outcome (Bandura, 1986). Teachers can have a different sense of their ability to affect outcomes across different tasks and/or areas (e.g., instruction, management, and engagement) (Tschannen-Moran & Hoy, 2001). Therefore, it is necessary to understand how a teacher's self-efficacy beliefs within a given domain might be linked to different types of goal structures, or overall efficacy within the classroom (i.e., mastery or performance) (Wolters & Daughter, 2007).

Revisiting the notion of locus of control, if a teacher has an internal locus of control and believes that they are responsible for directing student growth, they are more likely to think that they are capable of influencing growth and in turn may produce desired outcomes. On the other hand, if a teacher believes that they do not have any real power to bring about change due to circumstances outside of themselves, it is possible that they will be less motivated to work hard to produce measurable outcomes (Rotter, 1975). Research shows that low self-efficacy beliefs correlate to external locus of control, which given Rotter's explanation of reinforcement is associated with low overall efficacy (Rotter; Ware & Kitsantas, 2007).

CHAPTER 2. NEEDS ASSESSMENT

Needs Assessment Study

A needs evaluation study was conducted to gather data regarding teachers' experience of and response to stress within a private school for students with social and communication challenges. Short-term objectives of the study were to understand the following: teachers' general stress level, specific classroom-based stressors, ways that teachers deal with stress (coping), self-efficacy beliefs, and overall efficacy.

Research Questions

RQ1: What is the perceived general level of stress experienced by teachers at private schools for students with mild to moderate special needs?

RQ2: What classroom-based stressors most significantly influence teachers' levels of stress at private schools for students with mild to moderate special needs?

RQ3: What coping strategies do teachers use most frequently in response to the experience of stress at private school for students with mild to moderate specials?

RQ4: What are teachers' beliefs about their ability to manage a classroom effectively, given the presence of classroom-based stressors, within the context of private schools for students with mild to moderate special needs?

Setting and Sample Population

Fifty-six teachers were recruited from across five different schools within Maryland and Virginia. Four of the schools were private, and one was nonpublic. All schools serve students with mild to moderate special needs, related to social and communication challenges and/or language-based learning differences. For the purposes

of this study, teachers were defined as full-time school-based professionals who plan for and implement instruction for at least one core subject area (language arts, math, social studies, or science) to either whole or small groups, and as a result must manage a classroom. Within this setting, there are times when instructional assistants or related service professionals meet this criterion.

The response rate was approximately 71% with 40 out of 56 potential participants responding to the survey. Two responses were not included because of incomplete surveys and three were excluded because respondents were not full-time employees. Individuals who are employed full-time are more substantially affected by the school's collective efficacy (Goddard & Goddard, 2001). An additional seven responses were excluded because respondents were not responsible for planning and implementing instruction for an academic class. Within the context of the study, classroom-based stressors for teachers teaching core subject areas may have included concerns related to progress monitoring, reporting, and communicating results. This may have not been the case for teachers in other instructional positions. Of the 40 responses, 28 were analyzed for the needs assessment.

Demographic information. Of the 28 responses used, 24 participants identified as female and four as male. The majority of respondents fell in the 25 to 34 age range *(n* = 17, 60.71%). For ethnicity, 92.86% of respondents (*n* = 26) identified as White or Caucasian, 7.14% as Hispanic or Latino, and 3.57% as Black or African American. When describing their job position the majority of participants identified as a teacher (*n* = 20, 71.43%), 17.86% as an instructional assistant, and 10.71% as other (e.g., classroom teacher and specialist; teacher and counselor; co-teacher). Regarding specific subject

areas, of the 28 respondents, 14.3% taught only language arts, 7.1% taught only math, 3.6% taught only social studies, 21.4% taught all subjects (language arts, math, social studies, and science), and 53.6% taught a combination of two or more subjects (e.g., math and science). All employees had a minimum of a bachelor's degree (n = 7, 25%) with the majority selecting graduate education as their highest level of education (n = 21, 75%). Approximately 36% (n = 10) of respondents reported holding teaching certifications.

Regarding years of experience teaching students with special needs, 32.14% of respondents (n = 9) had between 0-3 years, 21.43% had between 4-5 years, 32.14% had between 6-10 years, and 14.29% had more than 11 years. The majority of teachers (n = 22, 78.57%) taught elementary and middle school, grades K-8, and the same percentage taught in mixed grade level classrooms. As far as class size is concerned, 96.43% of respondents (n = 27) taught in a classroom that ranged from 5-10 students.

Instrumentation

Instrumentation was developed to measure variables related to research questions and was comprised of a web-based survey through Survey Monkey, with a combination of pre-established scales and researcher-generated questions (see Appendix A, Needs Assessment: Questions). The survey, entitled "Understanding Teacher Stress" began with an informed consent letter, which stated that the participant must agree to the above terms prior to proceeding. Question logic was used through Survey Monkey so that if a potential participant did not agree to the terms outlined in the informed consent letter they would be redirected to a disqualification page. Likewise, participants who agreed to the terms continued with the survey.

Measurement of Variables

Stress and response to stress. Scales from the Classroom Appraisal of Resources and Demands (CARD) School-Age Version were used to measure stress and the relationship between perceived demands and available resources. Lambert et al. (2009) developed the CARD in order to assess teacher experience of stress. Reliability for the demands scale has scored .92 and the resources scale has scored .95. The demands scale is comprised of 35 question items. Respondents were provided with the following direction: "Using the scale below, rate how demanding your classroom or teaching responsibilities are in these areas." As an example, respondents would then be asked to rate the "Number of children performing below grade level," on a scale of 1 "Not Demanding" to 5 "Extremely Demanding." A not applicable category was included for demands that teachers do not experience in their setting (Lambert, Abbott-Shim, & McCarthy, 2001). The resources section consisted of 30 question items and participants were provided with the following direction: "Using the scale below, rate how helpful each of these resources is with classroom and teaching responsibilities." For example, respondents would rate "Support personnel for children with problem behaviors" on a scale of 1 "Very Unhelpful" to 5 "Very Helpful" with a not applicable category for items that are irrelevant to the teacher's setting. Using this instrument, resources were examined as part of the overall problem of teacher stress (Lambert et al., 2001).

In order to utilize the scales from the CARD, permission and instrumentation were obtained from Dr. Lambert, one of the creators of the instrument. Dr. Lambert consulted on the selection of proper instrumentation and fielded questions related to test modality and scoring. Due to proprietary rights, Dr. Lambert scored the results of the two scales utilized (demands and resources) and consulted about findings. Originally, it was

thought that the CARD demands and resource scales would be applicable to special education teachers within a private school. However, based on the level of responses marked "Not Applicable" and the qualitative data from the survey, it is possible that the demands and/or resource scales did not fully capture the experience of special education teachers. Additionally, because the inclusion criterion for participation defined teachers as school-based professionals who plan for and implement instruction to students, not all respondents were classroom teachers.

It is also possible, that participants may have rushed (due to the length of the survey and time constraints) and/or that participants may have answered the resource questions based on whether they thought that the resources listed were generally helpful, rather than relating them specifically to their classroom. Originally, the hypothesis was that context was less important than perception, as the CARD instrument was originally intended for teachers within a public setting. However, the results of the needs assessment study suggest that context is a necessary consideration in addition to individual appraisal of environmental context. It is therefore important to consider potential limitations of the instrument used as it relates to special education teachers.

Furthermore, to understand the problem better, the researcher generated five survey questions (see Appendix A, Needs Assessment: Questions). Teachers were asked to rank their overall stress level on a Likert scale from 1 "Not Stressed" to 9 "Very Stressed." They were then asked about their top three stressors at work. Asking teachers to identify top stressors prompted important qualitative insights. Further, in order to understand coping, teachers were also asked about the top three ways that they manage stress at and outside of work (two separate questions).

These questions were created with as much clarity as possible. Language selected was simple and direct. Double negatives and double-barreled questions were omitted. Questions that created bias or lead the respondent were avoided. Additionally, question items that could be perceived as offensive were excluded (O'Leary, 2014; Schutt, 2012). Question items were shared with the researcher's executive sponsor and school leadership team in order to obtain feedback about any items that might be confusing or poorly worded.

Teacher beliefs. An instrument developed by Tschannen-Moran and Hoy (2001), known originally as the Ohio State Teacher Efficacy Scale (OSTES) and later as the Teachers' Sense of Efficacy Scale (TSES), was used to measure teacher beliefs. The short form of the scale was selected to assess classroom-specific self-efficacy beliefs around areas of student engagement, instructional strategies, and classroom management. While the classroom management subscale was most relevant to the study, the other two subscales were included due to the shortness of the scale (there are 12 questions) and possible relevance to understanding the bigger problem of teacher stress (Tschannen, Moran, & Hoy, 2015).

Reliabilities for the TSES-Short Form are strong, with an overall alpha of .90. Subscale alphas range from .81-.86, with classroom management equaling .86. The TSES-Short Form measures teacher beliefs using a Likert scale from 1-9. For example, a question item about classroom management on the TSES-Short Form is "How well can you establish a classroom management system with each group of students?" Responders are then asked to rank their answer from 1 "None at all" to 9 "A Great Deal" (Tschannen,

Moran, & Hoy, 2015). Researchers, such as Wolters and Daugherty (2007), have used the TSES to measure teacher self-efficacy and have referenced strong reliability scores.

In addition to the use of the TSES-Short Form, respondents were also asked a researcher-created question about their overall efficacy: "Are you able to effectively meet all of your students' needs (academic, social, and behavioral)?" Rankings were based on a 9-point Likert scale, with 1 as "Unable" and 9 as "Very Able" (see Appendix A, Needs Assessment: Questions).

Procedure

In preparation for survey administration, the researcher met in-person with three heads of school from the three campuses affiliated with the organization where the problem of practice was initially observed. The purpose of the study and procedures related to data collection were explained. Administrators provided email addresses of participants thought to meet inclusion criteria. As mentioned, in an effort to increase the sample size, administrators (one head of school and one curriculum coordinator) from two additional schools were contacted by phone.

Some administrators encouraged teachers to participate by providing them with time to take the survey (e.g., ending a staff meeting 15 minutes early). Many administrators openly supported the study, while also stating their understanding of researcher-participant confidentiality. Upon agreeing to allow staff participation, administrators (from the two additional schools) forwarded emails and/or provided potential respondents with researcher contact information, as well as reported the number of participants recruited. Even though administrators were involved in disseminating

information, participant confidentiality was clearly outlined within the email to potential respondents, as well as the informed consent letter.

All respondents received an initial email, which varied slightly depending on the population contacted. Within the email, participants were provided with a link to the survey through Survey Monkey. Email addresses were not linked to Survey Monkey as a way to insure anonymity among participants. A follow-up reminder email was also sent to all participants (see Appendix B, Needs Assessment: Sample Emails). Data collection occurred between March 23 and April 3, 2015, prior to teachers leaving for spring break.

Data were password protected through Survey Monkey and stored on the researcher's personal computer, which is password protected. Only the researcher had access to the Survey Monkey website, as well as to the stored data. Necessary data was shared with Dr. Richard Lambert in order to make sure the pre-established demands and resources scales (from the Classroom Appraisal of Resources and Demands School-Age Version) were analyzed correctly. Identifiable information was not included in any reports of the research and participant numbers were assigned to all surveys in order to ensure confidentiality. Additionally, data analyzed using SPSS software was encrypted with a password only known to the researcher and stored on the researcher's personal computer (Lambert et al., 2001).

Results

RQ1 asked about the perceived general level of stress among teachers at private schools for students with mild to moderate special needs, findings confirm the existence of teacher stress. When asked to rate their overall stress level, 50% of respondents (*n* =

27) rated themselves at 7 or higher on a 9-point scale (*SD*=1.9), with 1 being "not stressed" and 9 being "very stressed".

When analyzing data from the perspective of the relationship between perceived demands and resources, the results were surprising. As mentioned earlier, Dr. Lambert assisted in scoring the two scales of the CARD. According to Lambert et al. (2009), scoring was "…calculated by subtracting the standardized versions of the scale scores, Demands minus Resources, and the standard error of measurement for the difference score was used to create a 95% confidence interval around a difference score of 0" (p.980). Furthermore, "The upper and lower bounds on this interval were used to classify teachers into one of three groups" (Lambert et al., 2009, p.980).

The three groups generated from the scoring include demands greater than resources, resources equal to demands, and resources less than demands. Individual respondents whose demands were greater than available resources were considered at-risk for stress and potentially burnout (Lambert et al., 2009). Findings from the needs assessment indicated that while teachers rated themselves on average between somewhat to moderately stressed, not a single teacher rated their perceived demands as greater than their resources. Furthermore, only 5 out of 28 respondents fell into the group of resources equal to demands. Dr. Lambert expressed that this has never before happened and that typically 20-35% of a given sample will rate their demands as outweighing their resources (R.G. Lambert, personal communication, May 6, 2015).

RQ2 investigated specific classroom-based stressors and included responses to a question asking participants to identify their top three stressors at work. After coding the qualitative data, it was evident that the most notable classroom-based stressors include

student behavior (*n* = 15, approximately 54%); paperwork (*n* = 11, approximately 39%); time-related concerns (e.g., having enough time to get everything completed) (*n* = 10, approximately 36%); diverse student needs (*n* = 8, approximately 29%); and assessment (*n* = 7, 25%).

RQ3 investigated response to stress through coping strategies. Respondents were asked to name the top three coping strategies used at work and at home in order to gather more comprehensive information about how individuals dealt with stress. The most common coping strategies reported at work included: social supports, such as co-workers (*n* = 18, approximately 64%), relaxation strategies (i.e., music, movement, breathing) (*n* = 9, approximately 32%), organizational strategies (i.e., making lists, prioritizing, creating schedules) (*n* = 7, 25%), taking breaks (*n* = 6, approximately 21%), and thinking strategies (i.e., self-talk, positive thinking, cognitive reframing) (*n* = 4, approximately 14%). Participants also referenced activities outside of work, as a means to manage stress. Those most common coping strategies included: spending time with friends or family (*n* = 19, approximately 68%), exercise (*n* = 17, approximately 61%), relaxing (*n* = 7, 25%), and drinking alcohol or eating (*n* = 6, 21%).

RQ4, investigated teacher beliefs related to classroom management. The overall mean scores of the TSES-Short Form assessment, which included subscales in classroom management, instruction, and student engagement was 6.91 (on a 9-point scale, with 1- being “none at all” and 9- being “a great deal”). Teachers believed on average that they had between some degree and quite a bit of ability to effectively meet student needs in the areas of: student engagement (*M*= 6.67), classroom management (*M*=6.84), and instruction (*M*=7.23). The discrepancy between the number of participants reporting

behavior concerns as a top stressor and the moderate to high level of self-efficacy for classroom management may be due to the use of the TSES short form rather than the long form. The long form may have provided more comprehensive results**.**

In addition to reporting beliefs about efficacy across specific areas, teachers were asked to rate their overall efficacy to meet student academic, social, and behavioral needs. The weighted average (*M*=6.54, *SD*=1.2) suggests that teachers believe that they are somewhat to moderately able to meet student needs, according to the 9-point scale, with 1 being "unable" and 9 being "very able".

Independent samples t-tests were conducted through SPSS in order to compare overall stress level and efficacy beliefs based on gender and experience. While the mean for stress was lower for male (*M*=5.00, *SD*=2.9) than female (*M*=6.46, *SD*=1.8) teachers and the mean for efficacy was higher for male (M=7.00, SD=1.4) than female (*M*=6.46, *SD*=1.2) teachers, the subsample was small and the t-test did not reach a statistically significant level examining difference on the basis of gender (see Table 1; Gender Differences: Stress and Efficacy). Independent t-tests also did not reach a statistically significant level of difference between stress and efficacy based on experience generally. The only exception to this was a statistically significant difference related to efficacy when comparing teachers with more than 11 years of experience to teachers with 6-10 years of experience. Teachers with more than 11 years of experience reached statistically significant higher levels of efficacy (see Table 2; Experience Differences: Stress and Efficacy).

Table 1

Gender Differences from Needs Assessment Study: Stress and Efficacy

Variables		*N (%)*	*M*	*SD*
Stress	Female	23 (85.19)	6.09	1.83
	Male	4 (14.81)	5.00	2.94
Efficacy	Female	24 (85.71)	6.46	1.18
	Male	4 (14.29)	7.00	1.41

Table 2

Experience Differences from Needs Assessment Study: Stress and Efficacy

Variables		*N (%)*	*M*	*SD*
Stress	0 - 3 years	9 (33.33)	6.11	2.15
	4 - 5 years	6 (22.22)	6.50	0.55
	6 – 10 years	9 (33.33)	6.00	2.18
	More than 11	3 (11.11)	4.00	2.65
Efficacy	0 - 3 years	9 (32.14)	6.56	1.13
	4 - 5 years	6 (21.43)	6.67	1.37
	6 – 10 years	9 (32.14)	5.89	1.05
	More than 11	4 (14.29)	7.75	0.50

Discussion

It is critical to consider the disparity between self-reported ratings of stress and the results of the CARD in relationship to RQ1 and RQ2. At first glance, according to CARD results, findings suggest that teachers are not stressed. However, based on the self-reported stress levels as well as responses to open-ended questions about top stressors, it is clear that this is not the case. Half of the respondents ($n = 27$) rated

themselves a 7- or higher on a 9- point scale when asked about their overall stress level. When asked to name specific stressors, more than half of teachers noted student behavior. Other top stressors included paperwork, time-related concerns, diverse student needs, and assessments. The problem of teacher stress is a valid concern given the self-reported ratings of stress and the prevalence of specific classroom-based stressors.

In reference to RQ3, the most common coping strategies reported at work related to social support (e.g., co-workers), relaxation (i.e., music movement, breathing), organization (i.e., making lists, prioritizing, creating schedules), taking breaks, and thinking (i.e., self-talk, positive thinking, cognitive reframing). Those who rated their stress level highest (n = 14) also cited the use for social support (approximately 86%). However, approximately 64% (n = 14) of those reporting higher levels of stress also reported coping with stress through organizational strategies or making efforts to work harder. These findings suggest that those who were most stressed might believe that they can overcome stress through increased work effort. Concerning RQ4, teachers reported the belief that they are somewhat to moderately able (M=6.54, SD=1.2) to meet student academic, social, and behavioral needs.

Theoretical implications. Central to the needs assessment study was the affirmation of the problem that many teachers within a special education context experience high levels of stress. Additionally, it is clear that there are common classroom-based stressors experienced by teachers who work at private schools for students with mild to moderate special needs. On average, teachers within the target population have some degree to quite a bit of self-efficacy beliefs and rate themselves as somewhat able to moderately able to effectively meet student academic, social, and

behavioral needs. While there is limited research currently available on stress level and/or efficacy of special education teachers within a private school, consideration of context in conjunction with appraisal theory is critical. Also paramount is the importance of remembering the complex and reciprocal relationship between individual characteristics and perception, their behavior, and the environment (Bandura, 1986).

Practical implications. The qualitative responses teachers gave related to their top three stressors at work provide insight related to future instrumentation used to assess stress among special education teachers and/or future areas where additional data would be helpful. First, the magnitude of responses that indicated behavior concerns as a top stressor was substantial. Therefore, it would be beneficial to explore this broad area of need as it relates to teachers within the setting of a private school for students with mild to moderate special needs. Second, when considering instrumentation such as the CARD, it may be necessary to examine whether there are enough questions in the demands section related to student behavior and/or classroom management.

Furthermore, it might be advantageous to ask how behavior concerns along with other stressors prevent teachers from meeting various stakeholder expectations. For example, when teachers feel plagued with paperwork, or are having trouble meeting all of their demands in the allotted amount of time, do they have difficulty attending to the present and/or are they as aware of their emotional response? Student behavior might compound this experience and it may be difficult for teachers to proactively implement positive behavior supports and avoid reactive responses when misbehavior occurs. When considering instrumentation that measures the demands of special education teachers, stressors frequently mentioned by participants, need further study. Additionally,

examining how teacher experience may relate to stress level and overall efficacy may provide important insights related to how to better support teachers within a specific environment.

Future research. It may be beneficial to learn more about the frequency and duration in which teachers use coping strategies. For example, do respondents engage in productive coping strategies on a weekly, daily, or hourly basis? Do some coping strategies lend themselves better to a given school environment than others? How do coping strategies mitigate stress?

In addition, it could be helpful to explore the relationship between self-efficacy beliefs and stress further. For example, if a teacher states that they are somewhat able to meet student needs, are the top stressors listed part of why they believe they are not very able to meet student needs? Is stress a matter of attention, in other words, it is challenging to meet various needs and make decisions because one has to be in a continual state of multi-tasking? How do coping strategies relate to not only one's experience of stress but also to self-efficacy beliefs?

Limitations. The study was conducted within a specific context, a private school for students with special needs, and therefore may not be generalizable to teachers within other special education settings (i.e., public schools). The focus was on teachers working with students with mild to moderate social/communication and/or language-based learning challenges. Therefore, findings may not generalize to special education teachers working with other student populations.

Additionally, many of the questions asked throughout the survey were sensitive in nature. Therefore, it is possible that some participants responded in socially appropriate

ways. This may be especially true within three of the five schools, where a staff survey is distributed annually without the guarantee of anonymity. As a result, staff may be skeptical of surveys administered within the same work setting and despite the informed consent form; some participants may have been reluctant to answer honestly.

Another important consideration is that teachers were asked to complete a survey at a busy time in the school year (right before spring break). It is possible that participants were rushing and/or experienced exhaustion while taking the survey. In addition, few qualitative measures were included and the study of stress may benefit from participant interviews or journals. Understanding teacher stress over the course of time, through mixed methods research, would help to enhance findings. Finally, while the sample size was sufficient to gain insight into the problem within a target school, the small sample makes it difficult to generalize results to a wider population.

Guiding Research Question

Ultimately, it is important to remember the many theoretical underpinnings that help to conceptualize the experience of stress. When considering individual response to stress, Segerstrom and O'Connor (2012) state the following:

> People who actively try to change problems (e.g., through focusing efforts on tasks) or approach their emotions (e.g., through acceptance or appraisal) may have better psychological and physical health outcomes than those who try to avoid problems (e.g., by giving up or disengaging) or emotions (e.g., through distraction)." (p.131)

While it is important to understand environmental stimulants that prompts stress, it is imperative that research focuses on helping teachers approach their emotions in a way

that supports their emotional well-being. It is not always possible to change an environmental context and often individuals appraise environmental stimuli differently. However, by working to approach thoughts and/or emotions in a way that may positively influence behavior (response), it may be possible to support teachers' experience of stress (Segerstrom & O'Connor). Therefore, how can we further support teacher emotional response to stress in order to positively impact overall well-being and commitment to long-term meaningful practice?

CHAPTER 3. INTERVENTION LITERATURE REVIEW

Negative emotions from student misbehavior are common and often influence teachers in an undesirable way (Black & Fernando, 2013). Special educators in particular experience significant stress from student misbehavior (Hinds, Jones, Gau, Forrester, & Biglan, 2015). The way teachers react to specific stressors and the coping strategies they use can perpetuate or alleviate stress (Lewis et al., 2011). Along the same lines, teachers are more likely to engage in coping responses that exacerbate their stress response, as they experience increasing levels of frustration (Austin et al., 2005). Mindfulness practice may serve as a way to shift teachers' perception of and response to stress (Flook et al., 2013). While this shift may not change the stressor of student misbehavior objectively, it may shift the nature of how teachers' experience and respond to student misbehavior (Flook et al., 2013). Hinds et al. (2015) suggest that teachers may react to stressors in a more productive way when they gain awareness of how unpleasant emotions affect their behavior.

Mindfulness, Emotional Regulation, and Stress

Stress is subjective (Lazarus, 1991; Austin et al., 2005) and encompasses a complex interaction between the individual's thoughts and emotions at the biological level, behavior, and the environment (Bandura, 1986; Phelps, 2006). It is often tempting for people to avoid experiencing negative thoughts and emotions, a process termed experiential avoidance (Hinds et al., 2015). Albrecht (2014) offers mindfulness as an alternative to avoiding negative emotions. When individuals are mindful they do not try to avoid negative feelings, rather they notice physical and mental experiences, all the while returning their attention to the present moment (Albrecht). In other words,

mindfulness is a practice of nonjudgmentally noticing and refocusing attention instead of becoming consumed by feelings and emotions and allowing that consumption to influence behavior (Albrecht).

When people choose to accept or at least tolerate the body's reaction to stress, rather than avoid or try to escape discomfort, they experience improved psychological outcomes (Jeffcoat & Hayes, 2012). Hülsheger, Alberts, Feinholdt, and Lang (2013) wanted to determine how mindfulness might increase job satisfaction and decrease emotional exhaustion when employees encounter emotionally charged situations at work. They found that engagement in surface acting, a form of experiential avoidance in which employees avoid negative emotions in order to fake expected work behaviors, leads to decreased mindfulness. In contrast, mindfulness served as a mechanism to protect against emotional exhaustion and encourage greater job satisfaction (Hülsheger et al.).

Prakash, Hussain, and Schirda (2015) studied the relationship between mindfulness and stress among younger and older adults. These researchers wanted to learn how emotional regulation could mediate the relationship between mindfulness and stress (Prakash et al.). They found that the more mindful a person is, the less they perceive to be stressful (Prakash et al.). In addition, when participants demonstrated greater mindfulness, regardless of age, they were better able to regulate their emotions and as a result were less stressed (Prakash et al.). Within schools, where environments contain much competing stimuli, it might be especially helpful for teachers and students to become increasingly aware of the interaction between physical, psychological, and behavioral responses (Albrecht, 2014).

Mindfulness: Parents of Children with Special Needs

Cachia, Anderson, and Moore (2016) conducted a review of the literature to analyze the effects of mindfulness as an intervention to reduce stress for parents of children with Autism Spectrum Disorders. They found that when parents respond to children in a reactive way, because of their own stress, they unintentionally exacerbate the problem behavior itself, which in turn intensifies their own stress response. In their review, Cachia et al. found that this "stress cycle" could even occur when parents possess the knowledge of how to respond to their children's misbehavior in a productive way. Results of their review suggest mindfulness as an effective practice to increase parental awareness of negative emotions and ability to respond with self-compassion. Awareness and self-compassion prompted parents to manage their children's problem behavior in a more proactive way (Cachia et al.). While completed with parents, Cachia et al.'s review may have substantial implications for the importance of increasing teacher awareness and self-compassion in order to respond to the specific stressor of student misbehavior in a more productive way.

Mindfulness: Educational Environments

Mindfulness practice may increase awareness, which is necessary to engage in self-regulation (Flook et al., 2013; Flook, Goldberg, Pinger, & Davidson, 2015). While conducted in pre-school classrooms with young children, Flook et al. (2015) investigated the impact of mindfulness-based social training as it relates to positive outcomes across student academic and behavioral domains. Their study focused on the implementation of a 12-week mindfulness-based training aimed at helping preschool children develop prosocial behaviors. Students in the treatment group received two direct instruction

lessons per week related to mindfulness, kindness, and compassion. In a sharing task, children had ten stickers in an envelope and were told that they could keep as many to themselves as they wanted or they could give them away to others. While different children may find stickers more or less enticing, children in the control group kept more for themselves over time. This was not the case for those in the treatment condition (Flook et al., 2015).

According to teacher-reported data, when compared with the control group, the group who received the intervention also earned higher marks in the areas of approaches to learning, healthy and physical development, and social emotional development. This remained the case three months following the intervention. The treatment group made greater gains in the areas of cognitive flexibility and delay of gratification. The authors note the importance of considering individual differences among children. However, the results demonstrate the potential implications of mindfulness-based programs within the classroom as a means to improve self-awareness, self-regulation, and overall social-emotional competencies (Flook et al., 2015). By engaging in mindfulness programs that aim to foster awareness and self-compassion, young children show improvements in the following areas: executive functioning, attention, self-regulation, social competence and overall well-being (Flook et al., 2015; Mendelson, Greenberg, Dariotis, Gould, Rhoades, Leaf, 2010).

Mindfulness: Special Education Environments

Hinds et al. (2015) explored the possibility of negative psychological outcomes (i.e., depression and burnout) from teacher stress related to student misbehavior and engagement in experiential avoidance. Their study included a sufficient sample (n = 529)

of teachers (special educators comprised approximately 15%). In conjunction with finding that special educators' experienced higher levels of stress than general educators related to student misbehavior, they found a statistically significant correlation between teacher-identified challenges with managing student behavior and negative psychological outcomes (Hinds et al.). More specifically, negative outcomes (i.e., depression and burnout) were associated with the extent to which teachers engaged in experiential avoidance when faced with the stress of student misbehavior (Hinds et al.; Segerstrom & O'Connor, 2012). Hinds et al. also propose mindfulness as a potential intervention to promote well-being and reduce experiential avoidance among educators.

Mindfulness and Self-Compassion

Through cultivating mindfulness, individuals can work to build self-compassion, and will be more likely to choose proactive behaviors (Akin, 2014). Akin (2014) defines self-compassion as, "…being affectionate and gentle towards oneself in the face of failure, pain, or perceived inadequacy and requires acknowledging that these experiences are part of the human condition and that all people, oneself included, are worthy of compassion" (p. 101). Self-compassion includes mindfulness, as well as the ability to regulate emotions in a productive way, which leads to less reactive behavior (Akin, 2014; Hall, Row, Wuensch, & Godley, 2013). Increased mindfulness and self-compassion could potentially help teachers cope more effectively with occupational stress (Birnie, Speca, & Carlson, 2009).

Method

Unaddressed stress negatively influences teacher social-emotional regulation and can make it difficult to manage classrooms in a proactive way (Jennings et al., 2013;

Jennings & Greenberg, 2009). Teacher inability to model social-emotional regulation within the classroom has been associated with negative outcomes related to student misbehavior (Jennings & Greenberg, 2009). An unfortunate cycle ensues, because if teachers have a difficult time managing emotions when student misbehavior occurs, the problem is often perpetuated (Jennings & Greenberg, 2009). When teachers feel depleted, it is common for them to end up coping with stress in a negative, avoidant, or counterproductive way (Jennings & Greenberg, 2009).

A review of the literature was conducted to consider the evidence available to determine if mindfulness is an effective coping strategy for teachers. The scope of the review focused on teachers responsible for teaching students in grades K-8. While teacher outcomes were the primary focus of investigation, articles that reported student outcomes were also included because student outcomes have the potential to impact teachers, for example by showing evidence of reduction in student misbehavior. Additionally, articles detailing studies that occurred with general and special education populations, as well as in public and private school settings were included in the review. Conversely, studies conducted within clinical settings, or that predominately included teachers within pre-school or high school settings were excluded because these settings were so far removed from the specified context.

Instrumentation

When evaluating articles, it is critical to appraise researcher arguments, as well as references used to support research questions, justify study scope, and explain findings (Gersten, Fuchs, Compton, Coyne, Greenwood, & Innocenti, 2005). Evaluating articles by using high-quality indicators related to specific domains established by Gersten et al.

(2005) helps to establish a current evidence base for a given intervention. Studies with high-quality designs (e.g., randomized experimental control-trial designs), and which measure the effects of an intervention on a population of teachers or students, are considered evidence based (Kretlow & Blatz, 2011). These studies, in addition to meeting specific quality indicators, have also been peer-reviewed and published in scholarly journals (Kretlow & Blatz, 2011).

Literature Search

Before embarking on a systematic search, it was important to explore the different ways that mindfulness training has been integrated into various settings. By attending to these differences, it might be possible to select the best options for professional development and/or integration into the classroom within a given context. While many approaches provided direction, it was equally as important to consider the practicality of implementation within a specific school context. For this reason, mindfulness practice completed in conjunction with practices such as, yoga or other therapies, were excluded because of the challenges related to implementation feasibility, cost, and training needs (Mendelson et al., 2010).

After setting search parameters, the following databases were used in Ebscohost: Education Full Text; Education Source; ERIC; Psych Articles; Academic Search Complete; Health Source: Nursing/Academic Edition. Key terms included: *mindfulness* AND *classroom*; *students with special needs; students with autism spectrum disorders; self-awareness; self-compassion; self-regulation; psychological flexibility; special education teachers; teacher stress; student behavior; teacher behavior; emotional regulation; behavior management; social learning;* AND *classroom climate*. Search

terms were selected based on the preliminary findings related to mindfulness detailed in the introduction. In addition to searching the identified databases, The Collaborative for Academic, Social, and Emotional Learning (CASEL), which produces guides that review the evidence base for social-emotional programs (CASEL, 2012), was also consulted in order to locate evidence about a specific social-emotional learning curriculum that incorporates mindfulness into the classroom setting (CASEL, 2012).

Only recent (2001-present) peer-reviewed journal articles were reviewed in order to establish a current evidence base for the intervention in question. Twenty-five peer reviewed journal articles were located from an initial search of the databases. Of those 25 articles, only articles that included a quasi-experimental design with a treatment and control group were included in order to provide a model for conducting research (Kretlow & Blatz, 2011).

Procedure

As mentioned, Gersten et al. (2005) outline specific quality indicators related to the evaluation of research articles. Their work was used as a guide to examine the quality of studies in relationship to specific indicators. Their framework includes specific domains and indicators in order to determine research quality. Quality indicators are separated into two groups, those that are essential and those that are desirable. The essential quality indicators relate to the following domains: describing participants, implementation procedures, outcome measures, and analysis (Gersten et al.). Based on Gersten et al.'s recommendations, experimental and quasi-experimental studies were evaluated in accordance with the following criteria: (a) clarity of participant information (e.g., selection procedures; characteristics; appropriateness; sample size; attrition); (b)

explanation of intervention and fidelity of implementation evidence; (c) use of multiple reliable measures to assess impact of intervention, with attention to timing and conditions of measurement; (d) clear data analysis techniques related to research questions and purposeful analysis of effect size, as well as; (e) discussion of generalizability (Gersten).

According to Gersten et al. (2005), studies classified as high quality must meet all essential quality indicators and at least half of the desirable indicators listed. Acceptable studies must meet the majority of essential quality indicators (all but one) and at least one of the desirable indicators (Gersten et al.). They suggest that an evidence-based practice must have at least two high-quality studies or a minimum of four acceptable studies. In addition, the effect size must be substantial (Gersten et al.). These indicators helped to evaluate articles identified through systematic review. However, a practice may remain promising even if it does not yet meet the strict criterion outlined.

Results

After conducting a systematic search with established indicators in mind, as well as the inclusion and exclusion criteria established in the search protocol, six high quality studies were located (see Appendix C, Table C1, Evaluation of Study Quality). Two studies met all of the essential quality indicators and four studies met at least seven out of eight of the essential quality indicators. All studies met at least half of the desired quality indicators. Therefore, according to Gersten et al. (2005) it would be appropriate to label all six studies located as high quality. Studies were summarized related to purpose, setting and participants, method, measures, procedures, and findings (see Appendix C, Table C2, Summary of Studies from Literature Review).

Flook et al. (2013) designed an empirical mixed method study to measure the impact of Mindfulness-Based Stress Reduction (MBSR) on the personal and professional lives of teachers within low-income public schools. The authors examined the relationship between mindfulness, training and teacher instructional practice, attention and emotion, as well as experience of stress. They hypothesized and confirmed that mindfulness training would correlate to increased awareness and positive outcomes regarding instructional practice, attention and emotional awareness, and decreased teacher stress and burnout. Participants in the intervention group, over the course of 8 weeks, attended approximately twenty-six hours of formal mindfulness training. Results suggest that teachers gained awareness and self-compassion through consistent mindfulness practice. They also experienced less psychological distress and were less prone to burnout. Based on study results, it is reasonable to suggest that ongoing mindfulness practice has the potential to support teachers' abilities to manage stress at work (Flook et al.).

Similarly, Roeser et al. (2013) examined mindfulness training (MT) as a professional development aimed at supporting public school teachers' stress level and potential for burnout. The goal was to look at how MT would increase use of resilient coping mechanisms (mindfulness and self-compassion) among participants. Two randomized trials were conducted, one in Canada and one in the United States with a combined 113 teachers (58 from Canada and 55 from the United States). Self-report measures related to mindfulness, self-compassion, burnout, and anxiety and depression (US sample only) were used. Additional data was taken on days absent from work due to illness, blood pressure and resting heart rate, and cortisol levels (Canadian sample only).

Teachers kept logs of daily mindfulness practices throughout the intervention period. Teachers in the treatment group completed a 36-hour intensive mindfulness program over a period of eight weeks during the spring or fall (the waitlist control group received treatment at this time). The majority of participants evaluated the program with high regard (Roeser et al.).

Researchers were able to show that increased mindfulness and self-compassion help teachers cope with and respond to occupational stress in a resilient way (Roeser et al., 2013). At post-test, teachers showed significant improvement in mindfulness and self-compassion compared with the control group, as well as reduced stress and potential for burnout. While teachers in the study were self-selected and included much self-report data, results illustrate the importance of mindfulness and self-compassion as resilient coping strategies for stress-prone teachers to develop (Roeser et al).

Further, Jennings et al., (2013) assessed the impact of CARE (Cultivating Awareness and Resilience in Education) as it relates to teacher emotional experience and well-being. Unlike the previous studies, special educators were reported within the sample; however, they represented a small percentage of the overall sample. Jennings et al. (2013) hypothesized that by engaging in CARE, a 34-hour program focused on emotions, mindfulness, and self-compassion, general and special education teachers, as well as specialists would experience improvement related to well-being, mindfulness, efficacy, and burnout. Results suggest that CARE positively influenced general well-being, efficacy with regard to student engagement and instruction, but not classroom management, burnout related to Personal accomplishment, but not Emotional exhaustion

or Depersonalization, and well-being related to observing and non-reacting, but not with describing, acting with awareness, and/or non-judging subscales (Jennings et al.).

In contrast to the previous study, Benn, Akiva, Arel, & Roeser (2012) focused specifically on teachers and parents of children with special needs. They explored the impact of a school-based intervention program focused on mindfulness training (MT). They hypothesized that a short and intensive MT intervention (36 hours of direct instruction over a 5-week period) would help participants gain mindfulness, lessen stress, improve overall well-being, as well as teaching/parenting efficacy. Findings suggest that an increase in mindfulness (non-judgmental awareness of present experience) mediated decreased experience of stress, anxiety, and negative affect among participants after the intervention period. Following the intervention, the self-compassion, personal growth, empathy, and willingness to forgive others increased among participants. Educators were able to develop teaching self-efficacy beliefs through MT. A downside of the study was that the sample size decreased over time and those who remained in the intensive intervention program may have been motivated to do so, thus skewing the generalizability of the sample. Nonetheless, findings provide support for the implementation of a school-based mindfulness program to support teacher well-being and decrease stress (Benn et al.).

In their research, Schonert-Reichl, Oberie, Lawlor, Abbott, Thomson, Oberlander, and Diamond (2015) discussed the benefits of implementing a social emotional learning (SEL) curriculum, based on mindfulness, through weekly lessons and daily mindfulness practice within upper elementary classrooms. They asserted that by promoting a positive emotional climate within the classroom, as well as emphasizing SEL and mindfulness,

students would make substantial gains. Findings of their study indicate that children in the intervention group who received instruction based on the MindUP curriculum demonstrated gains in executive functioning, overall well-being, and aspects of social and cognitive wellness (Schonert-Reichl et al., 2015).

As previously mentioned, the CASEL guide was consulted in order to better understand the current evidence base behind the MindUP curriculum. Schonert-Reichl et al.'s (2015) study builds off an earlier study conducted by Schonert-Reichl and Lawlor (2010), which evaluated the effects of a classroom-based mindfulness curriculum, ME, later renamed MindUP. The study assessed the effects of the curriculum, which included daily mindfulness practice, on the development of student social emotional competencies. Qualitative findings indicate that teachers evaluated the program with high regard and that the benefits of the curriculum were not only directed toward the individual learner but supported the classroom overall. Quantitatively, students who received the intervention demonstrated significantly increased levels of optimism and a trend in the positive direction for positive affect. Teacher ratings of student social-emotional competencies showed that teachers noticed an improvement in prosocial behaviors for students (Schonert-Reichl & Lawlor, 2010).

Discussion

Four of the six studies centered around the effects of mindfulness-based professional development on teacher outcomes related to well-being, mindfulness, the reduction of stress, attention, emotional regulation, instructional strategies, and overall efficacy (Benn et al., 2012; Flook et al., 2013; Jennings et al., 2013; & Roeser et al., 2013). From those four studies, Flook et al. and Roeser et al. focused on general

education teachers from public school settings. Jennings et al. also recruited participants from public schools, however their sample included general and special education teachers, as well as specialists. While Benn et al.'s study included educators from the public school district, teacher participants were teaching a summer program for students with special needs.

With these four studies in mind, two were conducted within urban settings in the Midwestern part of the United States (Benn et al., 2012; Flook et al., 2013). Two were completed within urban and suburban settings, one in the northeastern portion of the United States, (Jennings et al., 2013) and another with schools in both western Canada and the United States (Roeser et al., 2013). All utilized a randomized wait-list control design. Many measures were consistent across studies. The Five Facet Mindfulness Questionnaire, for example, measured mindfulness across all four studies. Maslach's Burnout Inventory was used to assess teacher burnout and Neff's Self-Compassion Scale was used to assess self-compassion across three out of four studies (Benn et al.; Flook et al.; Roeser et al.). Anxiety was measured across two studies using the State-Trait Anxiety Inventory (Benn et al.; Roeser et al.), as was use of the Positive and Negative Affect Schedule (Benn et al.; Jennings et al.). Self-efficacy beliefs were also measured in two studies (Benn et al.; Roeser et al.).

The above studies provide support for mindfulness training as a means to foster teacher social emotional wellness. Throughout the studies, positive effects of mindfulness training for teachers, such as increased mindfulness and self-compassion, as well as decreased stress and potential for burnout, were observed. When teachers are mindful, they are better able to model the social-emotional competencies that they wish to see in

their students (Roeser et al., 2013). When focusing specifically on teachers of students with special needs, Benn et al. (2013) highlights mindfulness training as a way to promote emotional regulation so that teachers react to students in a more positive way.

Based on Gersten et al.'s (2005) guidelines mindfulness training is classified as an evidence-based practice; however, training approaches described in each study varied slightly. In addition, when considering application to a specific context, time commitments across all four studies were extensive. Teachers would have to devote much time to trainings outside of the classroom. Administrators would have to be willing to schedule and provide ongoing access to training.

In addition, Jennings et al., (2013) noted that teacher self-efficacy related to classroom management did not increase when mindfulness training was provided outside of the classroom. Their study describes the complexity of the classroom setting in terms of the ways teachers appraise situations and how their appraisal changes teaching behaviors and the classroom climate (Jennings et al.). Therefore, it may be advantageous to consider an intervention aimed at supporting teachers' emotional wellness and the whole classroom environment.

Schonert-Reichl et al. (2015) suggest that in order to meet success when delivering SEL to students, teachers themselves must be able to display SEL competencies related to self-awareness and regulation (Schonert-Reichl et al.). They point out the need to assess how mindfulness practice within the classroom may be advantageous for teacher stress level and self-regulation abilities. Schonert-Reichl et al. (2015) assert, "Clearly, future research is needed that examine changes that occur in teachers as a result of implementing a SEL program that integrates mindfulness

practices" (pp.63). The implementation of a mindfulness-based program into the classroom as a means to not only benefit teacher emotional wellness and support the overall classroom climate is promising.

Two high-quality studies were identified in the literature related to the implementation of the MindUP curriculum as a means to support the integration of social emotional learning by teachers for students within the classroom setting (Schonert-Reichl & Lawlor, 2010; Schonert-Reichl et al., 2015). These efficacy studies have suggested that children who participate in the MindUP intervention demonstrate gains in executive functioning, overall well-being, and aspects of social and cognitive wellness. Findings also suggest that the positive benefit of mindfulness practices on the behavior of children could positively influence teacher stress and self-regulation (Schonert-Reichl & Lawlor, 2010; Schonert-Reichl et al., 2015). Teachers rated the program with high regard (Schonert-Reichl & Lawlor, 2010).

MindUP is a social-emotional learning program led by teachers for children integrating mindfulness lessons and practices into the classroom (The Hawn Foundation, 2011). By providing teachers with proactive strategies to create mindful teaching and learning environments, this might be possible. MindUP has the promise to be considered an evidence-based practice with two-high quality studies that meet Gersten et al.'s (2005) guidelines. However, when considering the evidence base in relation to implementation within a private special education setting, there are some important limitations. The studies conducted were not done in a private setting and did not focus specifically on special education teachers or students. The program was designed as a social-emotional learning program to be used proactively with a universal population in order to promote

mindfulness and prosocial behaviors (The Hawn Foundation, 2011). Therefore, research evaluating the benefits of MindUP within a specialized setting to support both teachers and students is still needed.

While it may be appropriate to attempt to reduce an identified stressor, such as student misbehavior, it is equally important to provide teachers with a coping mechanism to support overall emotional wellness at work (Segerstrom & O'Connor, 2012). Researchers Black and Fernando (2013) assert "…programs that train students in skills that promote prosocial behavior in order to create a non-disruptive classroom might alleviate teacher burden and benefit student learning" (pp.1242). They suggest the integration of mindfulness practice into the classroom as a means to benefit teachers and students alike (Black & Ferndando, 2013). Mindfulness practice overall has been shown to support teacher awareness and attention, emotional regulation and self-compassion, as well as teaching efficacy, stress levels, and feelings of burnout (Benn et al., 2013; Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013). Currently, there is limited research available that focuses on teacher benefits of classroom-based mindfulness integration. However, given the positive effects of mindfulness practice on teacher awareness and attention, as well as regulatory abilities, it is beneficial to further explore how mindfulness within the classroom might serve to benefit teacher mindfulness and protect against feelings of burnout.

CHAPTER 4. METHOD

Introduction

A study was conducted to evaluate a mindfulness curriculum on teacher outcomes of mindfulness and components of burnout (Emotional exhaustion and Personal accomplishment) within a specific school setting. As part of the evaluation, teacher satisfaction with the curriculum was also examined. Student behavior was also utilized as a dependent variable. The following questions were addressed:

RQ 1.0 Does the MindUP curriculum program alter teachers' perceptions of mindfulness in a nonpublic special education school?

1.1 Do teachers at a nonpublic special education school report a change in mindfulness ability (Observe, Describe, Act with Awareness, Nonjudge, and Nonreact) according to the Five Facet Mindfulness Questionnaire, after implementing MindUP program components, when compared with teachers who have not participated in the curriculum?

1.2 How satisfied are teachers with the MindUP program, as measured by a Satisfaction Survey?

RQ 2.0 Do teachers at a nonpublic special education school report a change in burnout according to the Emotional exhaustion and Personal accomplishment subscales of the Maslach Burnout Inventory- Educator Survey, when compared with teachers who have not participated in the curriculum?

2.1 Do teachers at a nonpublic special education school report a change in student behavior as measured by an increase in the overall percentage of points earned on student point sheets?

Intervention

MindUP is a social-emotional learning program that integrates mindfulness into the classroom setting and supports the development of prosocial student behaviors. MindUP consists of 15 lessons for teachers to deliver to students, along with optional supplementary cross-curricular activities. A staple of the program is the introduction and continuation of the Core Practice which consists of teachers leading students in mindfulness practice three times per day for three minutes each time. In addition, MindUP includes Once a Day Challenges for teachers in order to help them further their own mindfulness practice and better model mindfulness for their students. By implementing MindUP teachers and students may experience mutually beneficial results related to increased mindfulness (Schonert-Reichl & Lawlor, 2010; Schonert-Reichl et al., 2015), which has been shown to lead to enhanced social-emotional regulation (Benn et al., 2012) and benefit the overall classroom environment (Schonert-Reichl & Lawlor, 2010; Schonert-Reichl et al., 2015).

The implementation of the intervention lasted approximately thirteen weeks, with lessons broken up by grade range (K-2; 3-5; 6-8) and taught by the school's social learning specialist (SLS). The curriculum was designed for teachers to teach to their students; however, the researcher, who was also the school's SLS, taught lessons to students instead. The decision to have the SLS teach the MindUP curriculum was made since the SLS taught regular social learning lessons across all grade levels. As part of the needs assessment study, teachers cited time-related and paperwork concerns as top stressors. Changing the method of delivery for the purpose of the intervention would not only have added to teachers' workloads, but could have also created confusion around

roles and responsibilities. By having the SLS teach lessons, the intervention would be framed as a resource rather than a demand. Finally, having the same person teach the lessons to all students would increase the likelihood that a key piece of the intervention, the lessons, would be implemented with fidelity.

Lesson concepts were the same across each grade range, but instructional activities were enriched or modified to support learners' developmental and cognitive levels. For example, an activity intended for K-2 may have been used within a 3-5 class, provided that the activity was meant to achieve a similar instructional objective. Lessons were typically conducted weekly and generally lasted between 45-60 minutes. Teaching teams were asked to support instruction so that they would learn alongside their students and gain a greater understanding and appreciation for concepts. Teacher participants were also asked to complete daily Once a Day Challenges from the start of the intervention to support their own mindfulness abilities. In addition, teacher participants were given optional supplementary cross-curricular activities intended to support their instruction and the integration of lesson components into the school day. During week three of the intervention, teacher participants were asked to lead their students in completing the Core Practice at least three times a day for three minutes each time. Teacher participants were provided with suggested times to complete this practice (i.e., in the morning, after lunch/recess, and at the close of the day). In order to provide teacher participants with additional support, the researcher planned to meet with teacher teams each week for 10-15 minutes in order to preview the upcoming week's lesson activities, model specific practices, and answer any questions. These meetings were also meant to serve as a way to collect weekly fidelity checklists. Table 3 details the timeline of intervention and

program activities. A scope and sequences of units and lesson topics is detailed in Table 4. The first unit, "getting focused" helped students to understand brain functions, the definition of mindful awareness is, and how to focus awareness through "the core practice". While the first unit consisted of three lessons, and took three weeks to complete, the other units within the curriculum allowed for flexibility in terms of the length of time allotted to complete.

Research Design

A quasi-experimental pretest posttest control group design guided the collection of initial quantitative data followed by the collection of qualitative data to explain results (Creswell & Clark, 2011). There are strengths attributable to utilizing an explanatory quasi-experimental design, which include use of a comparison group, pre-post, and follow-up measures. By administering a pre-test to observe participant mindfulness prior to program exposure, the researcher established a baseline among treatment group participants when compared with the comparison group (Henry, 2010). Additionally, by using the same measure post-test and calculating gains in mean scores, across both conditions, the researcher was able to learn more about the effectiveness of the intervention (Henry, 2010).

Table 3

Timeline of Intervention and Program Activities

Activities	Participants	Purpose	Time Line 2016-2017 SY
Recruitment Meetings	School administration from treatment and comparison schools.	To provide intervention logistics and obtain support.	Mid-Late August
Information Sessions	Eligible participants from treatment and comparison.	To recruit potential participants and answer questions.	Late August (20-30 minutes each)
Pre-survey	Treatment and comparison participants who have signed informed consent forms.	To obtain baseline data through a web-based survey.	September 5th- 12th
Intervention Meeting	Treatment teaching teams.	To provide logistical information about curriculum implementation, answer questions, and introduce fidelity checklists.	Week of September 11th Following Data Collection (15-20 minutes)
Lesson Implementation	Treatment SLS teaches lessons. Members of treatment teaching teams support instruction when possible. Students in treatment group receive lessons.	To begin integrating the curriculum into the classroom setting.	September 19th- December 13th
Optional Cross-Curricular Connections	Treatment teaching teams deliver to students.	To increase integration of social learning into classroom instruction.	September 19th- December 13th

Activities	Participants	Purpose	Time Line 2016-2017 SY
Once a Day Challenges	Participants from treatment.	Daily challenges, in addition to the "core practice" to promote mindfulness at work.	September 19th- December 13th
Core Practice	Treatment participants and students.	To integrate daily mindfulness practice into the classroom.	Week of October 3rd- December 13th.
Ongoing Informal Meetings	SLS/Researcher meets with treatment participants.	To preview curriculum components, offer support, answer questions, and collect fidelity checklists.	September 19th- December 13th *Meetings were missed three of the intervention weeks. Fidelity data was still collected.
Core Practice Observations	SLS/Researcher observes treatment participants implementing Core Practice.	To ensure fidelity of implementation.	Observations started the week of October 16th Follow-up observations began the week of October 30th
Post-survey	Treatment and comparison participants.	To compare data baseline data from pre-assessment. Program satisfaction questions included on treatment group survey.	December 14th- 21st January 3rd and 4th
Follow-up Survey	Treatment participants.	To explain results and program outcomes.	January 25th to February 1st

Table 4

MindUP Scope and Sequence

Unit 1: Getting Focused	Unit 2: Sharpening Your Senses	Unit 3: It's All About Attitude	Unit 4: Taking Action Mindfully
Sept 19 - Oct 7 2016	Oct 10 – Nov 4 2016	Nov 7 – Nov 23 2016	Nov 28 – Dec 13 2016
How Our Brains Work	Mindful Listening	Perspective Taking	Expressing Gratitude
Mindful Awareness	Mindful Seeing	Choosing Optimism	Performing Acts of Kindness
Focused Awareness: The Core Practice	Mindful Smelling	Appreciating Happy Experiences	Taking Mindful Action in the World
	Mindful Tasting		
	Mindful Movement I		
	Mindful Movement II		

Theory of Treatment and Logic Model

Leviton and Lispey (2007) assert that theory is paramount when attempting to understand the reasons behind why a treatment may or may not be effective. The theory of treatment model presented in Figure 1 highlights the importance of strong fidelity of implementation, as well as the development of positive program appraisal. By developing an ongoing collaborative relationship with participants, the SLS will monitor fidelity and foster positive program appraisal. Together these factors will support the integration of mindfulness practice throughout the school day and any increase in teacher mindfulness. It is possible that an increase in teacher mindfulness and the integration of mindfulness practice throughout the school day will lead to decreased feelings of burnout.

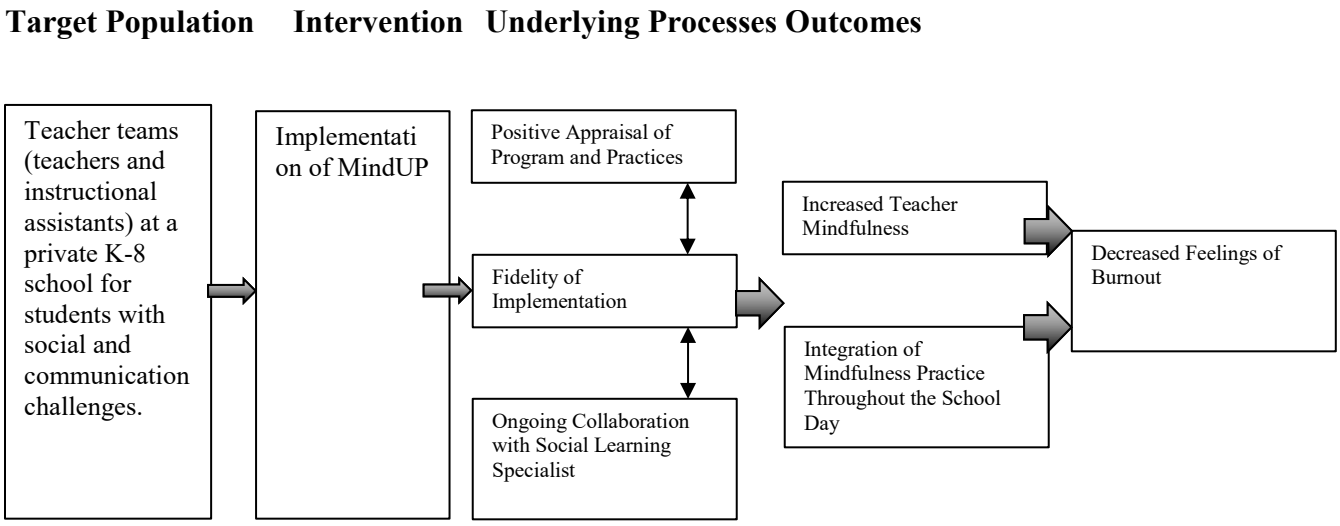

Figure 1. Theory of Treatment Model

Following the theory of treatment model, it is necessary to further analyze related inputs, treatment components, and outputs that will hopefully produce an intended outcome (Leviton & Lispey, 2007) As such, the logic model displayed in Figure 2 illustrates the connection between program activities, progress monitoring, and how ongoing social support could promote mindfulness integration, positive appraisal of mindfulness, and increased mindfulness abilities. The highlighted outcomes in the logic model indicate the Dependent Variables in the study.

Process Evaluation

Evaluating the implementation process by collecting fidelity data supported researcher analysis of outcome data (Nelson, Cordray, Hulleman, Darrow, & Sommer, 2012). Schonert-Reichl and Lawlor's (2010) study indicated that teachers implemented the core practice 87% of the time and lesson components 75% of the time. Therefore, 75% represented a reasonable conceptualization of high fidelity by teachers for the

purposes of the intervention. Conversely, low fidelity constituted completion of less than 75% of program components (i.e., the Core Practice and once a day challenges). As part of the process evaluation, a Researcher Fidelity Checklist, as well as a Participant Fidelity Checklist was utilized to measure the percentage of program components components completed throughout the intervention. The researcher also used an Observation Checklist to assess teacher participants' adherence to the Core Practice. The Researcher and Participant Fidelity Checklists, as well as the Observation Checklist will be described in the Method section. A process evaluation data collection matrix is detailed in Table 5.

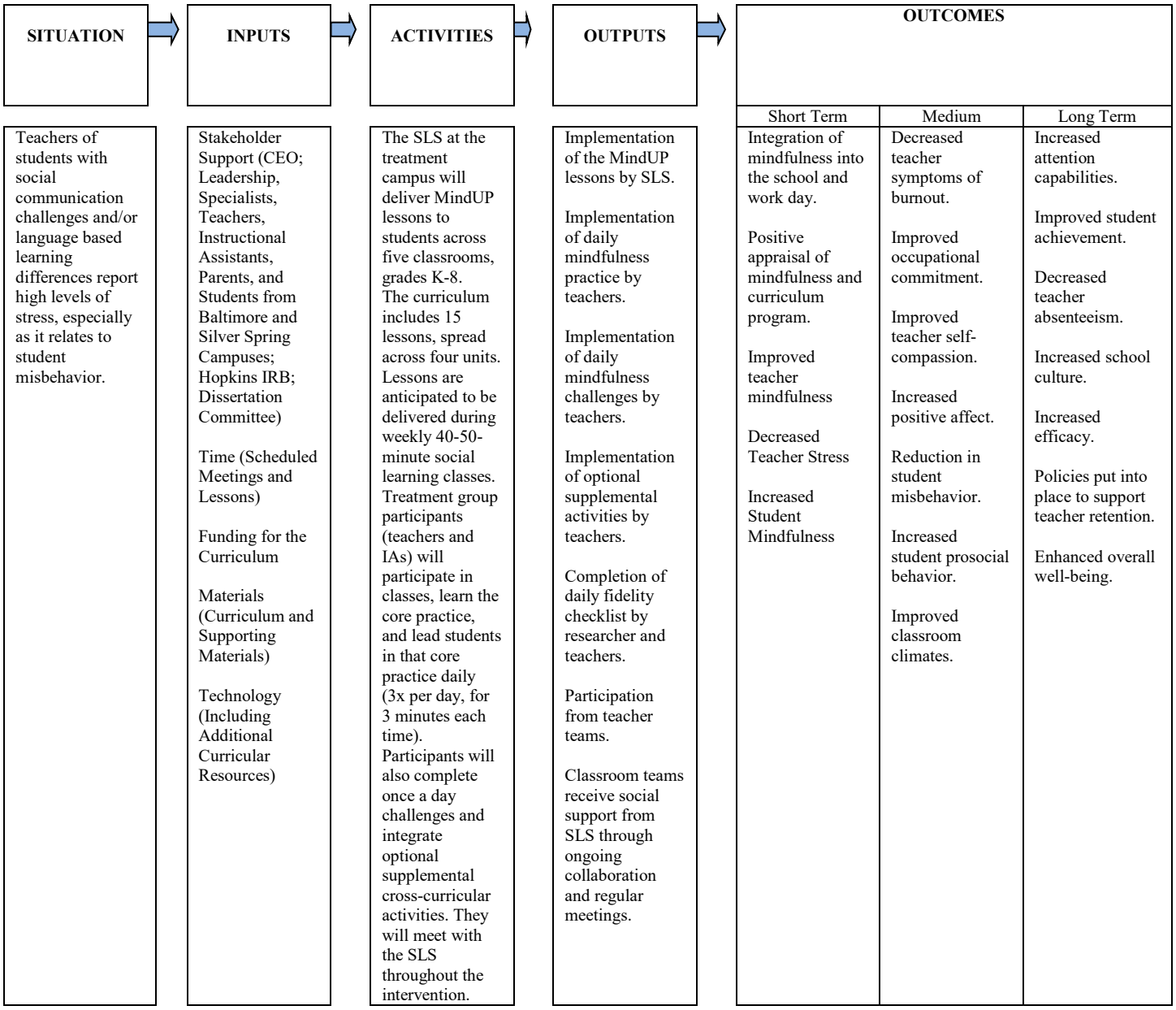

Figure 2. Intervention Logic Model

Table 5

Process Evaluation Data Collection Matrix: Fidelity

Fidelity Indicator	Data Source	Collection Tool	Frequency	Responsibility
Taught all lesson components	Researcher	Researcher Fidelity Checklist	Weekly	Researcher (SLS)
Integrated optional supplemental activities (percentage completed)	Participants	Participant Fidelity Checklist	Recorded Daily; Collected Weekly	Participants
Completed Once a Day Challenges	Participants	Participant Fidelity Checklist	Recorded Daily; Collected Weekly	Participants
Implemented Core Practice	Participants	Participant Fidelity Checklist	Daily (Core Practice; 3x per day); Collected Weekly	Participants
Attitudes toward practice	Participants	Satisfaction Survey	Post- Survey; Follow-Up Satisfaction Survey	Participants
Adherence to Core Practice	Researcher	Observation Checklist	2x throughout intervention	Researcher

Method

Participants

Teacher participants. Nineteen participants, nine from the treatment school and ten from the comparison school, were recruited to participate in the study. Eligible teacher participants included only full-time teachers and assistants in core academic classes for students in grades K-8. Chi square analyses were used to examine similarities between the two samples related to gender, job position, ethnicity, age range, and years of experience. While the samples were small, χ^2 tests indicated the samples to be similar (see Table 6, Participant Characteristics). There was no significant difference for gender χ^2 (df = 1, N = 15) = 0.60, p > .05; the majority of participants from both groups were female with 87.5% of participants from treatment *(*n = 8) and 71.43% from comparison (n = *7*). While both teachers and instructional assistants were included in the study, the majority from both groups were teachers with 62.5% from treatment (n = 8) and 57.14% from comparison (n = 7) and was not significantly different, χ^2 (df = 1, N = 15) = 0.04, p > .05. There was not a significant difference in terms of ethnicity, χ^2 (df = 4, N = 14) = 4.78, p > .05; the majority of teachers within both conditions indicated their ethnicity as White/Caucasian, 87.5% from treatment (n = 8) and 57.14% from comparison (n = 6). There was also not a significant difference for age range χ^2 (df = 4, N = 15) = 2.28, p > .05; and at least half of participants from both groups reported to be in the 25 to 34 age range, with 50% of treatment *(*n = 8) and 57.14% from comparison (n = 7). Similarly, there was no significant difference in terms of years of experience (df = 4, N = 15) = 2.28, p > .05; the majority of teachers across both conditions reported that they were currently in the first five years of teaching, 50% from treatment (n = 8) and 57.14% from

comparison (n = 7). Participants were required to teach a minimum of two core subjects, defined within the school settings as language arts, math, social studies, and science. In terms of grade range, participants from the treatment school mainly reported teaching students in either grades 3 - 5 (37.5%, n = 8) or 6 - 8 (37.5%, n = 8). The same was true for the comparison campus, where all participants (100%, n = 7) reported teaching students in the grade ranges of 3 - 8.

Trainer and observer. The researcher is a certified special education teacher and worked as the social learning specialist and dean of students at the treatment school during the 2016-2017 school year. The curriculum is intended for teachers to teach to their students and does not require formal training implement. As part of her job as the school's social learning specialist, the researcher administered the curriculum program to students in grades K-8. Teacher participants were asked to participate in lessons and meet regularly with the researcher.

Table 6

Participant Characteristics

Characteristic	Group		
	Treatment	Comparison	Total
	N (%)	*N (%)*	*N (%)*
Participants	8 (53.33)	7 (46.77)	15 (100)
Position			
Teacher	5 (62.5)	4 (57.14)	9 (60)
I/A	3 (37.5)	3 (42.86)	6 (40)
Gender			
Female	7 (87.5)	5 (71.43)	12 (80)
Male	1 (12.5)	2 (28.57)	3 (20)
Ethnicity			
Black/African American		1 (14.28)	1 (6.67)
Hispanic/Latino	1 (12.5)		1 (6.67)
White/Caucasian	7 (87.5)	4 (57.14)	11 (73.33)
White/Caucasian and Hispanic/Latino		1 (14.29)	1 (6.67)
Missing		1 (14.29)	1 (6.67)
Age Range			
18 to 24	1 (12.5)	1 (14.29)	2 (13.33)
25 to 34	4 (50)	4 (57.14)	8 (53.33)
35 to 44	2 (25)	1 (14.29)	3 (20)
45 to 54	1 (12.5)		1 (6.67)
55 to 64		1 (14.29)	1 (6.67)
Experience			
0-3 years	2 (25)	2 (28.57)	4 (26.67)
4-5 years	3 (37.5)	2 (28.57)	5 (33.33)
6-10 years	2 (25)	2 (28.57)	4 (26.67)
More than 11 years	1 (12.5)	1 (14.29)	2 (13.33)

Setting

Treatment school. The school where the intervention occurred has three campuses. Teachers from two campuses were recruited to participate in the study. The third campus is in another state and includes a high school. The two school campuses were selected to participate in the study because of their similarities. Both school campuses have similar staffing structure and day-to-day operations, serve students with mild to moderate special needs, and are in the same geographical location. While a formal diagnosis is not required to attend either campus, students generally have social and communication challenges related to diagnoses such as, Autism Spectrum Disorders, Pervasive Developmental Disorder- Not Otherwise Specified, and Attention-Deficit/ Hyperactivity Disorder. All students are expected to pursue a diploma-track program. Generally speaking, students come from affluent families; however, many families also qualify for and receive financial aid. The school expects 20-25% of students will receive tuition assistance across campuses.

The school campus where the intervention occurred is in Baltimore, Maryland and was in its sixth year of operation during the intervention. The school serves students in grades K - 8. At the time of the intervention, there were approximately 34 students enrolled, across five mixed grade classrooms. During the 2016-2017 school year, classrooms were comprised of teaching teams (a teacher and instructional assistant) with each teaching team specializing in two content areas (i.e., math and science or language arts and social studies). Instructional assistants traveled to all subject areas with their students. Students across grade levels switched classes throughout the day. The campus employed a full-time head of school, social learning specialist and dean of students,

behavior support specialist, director of admissions, and office manager. A part-time occupational therapist also worked with students and a professional advisory board provided access to a variety of other professionals, such as psychologists, behavior specialists, and speech-language pathologists. As part of fulfilling the school's mission, students participated in a social learning class along with other special areas, including art, physical education, music, and drama.

Comparison school. The comparison campus shares the same school name and mission as the treatment school, serves students K - 8, located in Silver Spring, Maryland. Both campuses have the same admissions criteria for students, hiring procedures for teachers and related services, along with access to the same curricular resources, and a similar school day. During the intervention period, the school was in its seventh year of operation and had approximately 50 students enrolled. There were approximately six mixed grade classrooms with teachers, co-teachers or a teacher and instructional assistant, leading each classroom. Teachers also specialized in various content areas. This school utilized a similar administration and related services model, as the treatment school, along with access to consultation from members of a professional advisory board. As part of the shared mission, students at this school also participated in social learning class and instruction in other special areas.

Measures

The Five Facet Mindfulness Questionnaire (FFMQ). Teacher mindfulness was measured using the FFMQ, which has consistently been used to assess mindfulness among teacher populations (Benn et al., 2012; Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013). The questionnaire has 39 question items, representing five

categories. The description on the questionnaire suggests that the five facets of mindfulness include Observing, Describing, Acting with awareness, Non-judging of inner experience, and Non-reactivity to inner experience. The questionnaire uses a 5-point Likert scale, with "1" standing for "never or very rarely true" and "5" as "very often or always true". Examples of question items are "I believe some of my thoughts are abnormal or bad and I shouldn't think that way" and "I find it difficult to stay focused on what's happening in the present" (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Jennings et al. (2013) report psychometric properties of coefficient alphas between .80 and .92 for the five subscales, with the coefficient alpha for the overall average of the scales as lower, at α =.63. Alternatively, Flook et al., (2013) assert that the FFMQ has "…good construct and predictive validity as well as adequate internal reliability for all five subscales with Cronbach's alphas between .75 and .91" (pp.185). In addition, Roeser et al. (2013) found the scales reliable in their study, with Cronbach alphas above .90.

The Maslach Burnout Inventory- Educators Survey (MBI-ES). Teacher burnout was measured using the Emotional exhaustion and Personal accomplishment subscales of the MBIS-ES. Avoidant coping responses to stress typically lead to negative teacher outcomes, such as burnout (Lewis et al., 2011; Rice, 2001). Multiple studies have used the MBI-ES to examine the benefits of mindfulness as a productive coping strategy to protect against teacher burnout (Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013). The MBI-ES consists of 22 question items total, 17 of which were used for this study, and provides a framework to examine teacher burnout as it relates to Emotional exhaustion, Depersonalization, and Personal accomplishment. The inventory employs a 7-point Likert scale, with "1" standing for "never" and "7" equaling "every day".

Samples of question items include: “I feel emotionally drained from my work” and “I have accomplished many worthwhile things in this job” (Maslach, Jackson, & Schwab, 1986). Jennings et al. found “coefficient alphas for the Emotional Exhaustion subscale were 0.89; Depersonalization, 0.70; and Personal Accomplishment, 0.79.” (p.382). In contrast, Flook et al. reported the following coefficient alphas: Emotional exhaustion, α = .90 and both Depersonalization and Personal Accomplishment, α = .76. Moreover, in Roeser et al.’s study as over α = .90 for all subscales across multiple time points in their study. Maslach et al. (2016) report coefficient alphas for the Emotional exhaustion subscale as α = .90 and the Personal accomplishment subscale as α =.71.

Student behaviors. During the intervention period, the treatment campus implemented a positive behavior support system and utilized a student point sheet (see Appendix D, Sample Student Point Sheet) to track points earned for respectful, responsible, and safe behaviors. Points were collected by teachers and instructional assistants on a daily basis and reported as weekly percentages earned by each student. Weekly averages of preexisting behavior data were compiled by grade range (K-2, 3-5, and 6-8) to provide a more complete picture of student behavior across the course of the intervention.

Satisfaction survey. As part of the post-survey measure, teacher participants in the treatment group completed a brief researcher-created satisfaction survey to assess satisfaction with MindUP and attitudes toward mindfulness practice generally. In addition to rating various program components using a Likert scale, participants were also asked open-ended questions. Sample question items include: “How likely are you to continue to practice mindfulness within your classroom?” and “Were there any factors

that made it difficult for you, your students, or your classroom overall to benefit from regular mindfulness practice?" See Appendix E for a copy of the Satisfaction Survey,

Follow-up survey. A researcher-created survey, similar to the Satisfaction Survey in the post-intervention program measure, was administered approximately one month following the intervention. In addition to rating various program components using a Likert scale, participants were also asked open-ended questions. Sample question items include: "Please describe any positive personal benefits of using mindfulness throughout your work day" and "Do you see any long-term benefits of the MindUP program?" A copy of the Follow-up Survey is available in Appendix F.

Teacher participant fidelity checklist. The researcher developed a fidelity checklist to track the percentage of completed program components. Teacher participants kept track of the percentage of program components that they completed daily. Checklists were collected by the researcher at the end of each week. See Appendix G for a copy of the Participant Fidelity Checklist.

Researcher fidelity checklist. The researcher also used a checklist to document percentage of lesson components taught each week. See Appendix H for a copy of the Researcher Fidelity Checklist.

Observation checklist. In addition to collecting fidelity data based on the percentage of program components completed, the researcher created a checklist to conduct brief observations of teachers leading the Core Practice within their classrooms. The researcher described the Core Practice for teachers, modeled the practice with teachers and students during week three of the intervention and reviewed the components of a successful practice. An Observation Checklist (see Appendix I) was then used to

conduct brief observations of teachers leading the practice twice during the intervention, once in the middle of the intervention and once towards the end. The checklist assessed teacher adherence to the core practice protocol.

Procedure

The following section details intervention activities including: gathering support and recruiting participants through meetings and information sessions, administration of the pre-survey measure, an intervention meeting with treatment teachers, lesson implementation, cross-curricular connections, Once a Day Challenges, the Core Practice, informal meetings, and the administration of post- survey and follow-up survey measures. Table 3 shows a timeline of intervention activities.

Meetings. During August 2016, the researcher met with the dean of students and spoke on the phone with the head of school at the comparison campus to tell them about the research and secure their support. An email was then sent to administration at the comparison campus with a copy of the informed consent form attached. The dean of students distributed the forms to eligible teacher participants so that they had time to read over the informed consent forms prior to the information session. The researcher also met informally with the head of school at the treatment campus to explain the researcher and secure support.

Information sessions. On August 24, 2016 the researcher met with eligible participants from the comparison school. Ten eligible participants attended the information session. The researcher reviewed the informed consent form and answered questions. In an effort to encourage participation, teacher participants in the comparison group who completed the pre-assessment measure received a $5 gift card to Starbucks.

These participants received another $5 gift card to Starbucks for the completion of the post-assessment. Gift card incentives were only available for participants who completed measures by specified deadlines. Participants were given time following the information session to sign forms, which were then collected later that day. All ten eligible participants signed informed consent forms.

On August 25, 2016, the researcher met with nine eligible treatment group participants to discuss informed consent forms. Because of the researcher's role at the school, the researcher reiterated that the decision to participate (or not) would in no way influence their job or treatment. Eligible participants were given an opportunity to ask questions. In an effort to encourage participation, participants in the treatment condition who not only completed pre- and post-measures, but who also completed at least 75% of program components (Core Practices and Once a Day Challenges) were entered into a drawing to receive a $50 gift card incentive to Starbucks, Target, or Amazon. The research approached each participant following the meeting to collect signed consent forms. All nine eligible participants signed informed consent forms.

Pre-survey. A web-based survey entitled "Supporting Social and Emotional Wellness in Special Education" was administered to participants from September 5 – 12, 2016. For confidentiality purposes, participants self-selected a four-digit identification code, which was used to match pre- and post- survey measures. The survey was emailed to participants with a web link (see Appendix J, Sample Email to Participants). The pre-survey was the same for treatment and comparison group participants and included a demographics section, as well as a pre-established questionnaire (FFMQ) and question items from the MBI-ES. The demographics section included questions about: gender,

age, ethnicity, job position, employment status, subject area, experience, and grade levels taught. The FFMQ section, asked participants to rate statements using a 5-point Likert Scale. The MBI-ES, which was entitled Human Services Scale, asked participants to rank how often they felt various job-related feelings on a 7-point Likert Scale. Sixteen participants completed the pre-survey measure, eight from treatment and eight from comparison.

Intervention meeting. Brief meetings were held between the researcher and teacher participants at the treatment school, following the pre-program survey, to detail program activities. These meetings lasted 15-20 minutes and included: a verbal overview of the MindUP curriculum, a preview of upcoming lessons and supplemental activities, information about logistics, and an opportunity for participants to ask questions. Rather than meet in a whole group setting, the researcher met with each teaching team separately (i.e., five meetings were held).

Lesson implementation. The researcher taught all units, which consisted of 15 lessons total, to students K-8. When possible, teacher participants were asked to participate in lessons to become more familiar curriculum content and have practices modeled for them. Lessons began on September 19, 2016 and lasted until December 13, 2016. Lessons were generally scheduled weekly and lasted approximately 45 minutes. The researcher kept track of the percentage of program components taught using a Researcher Fidelity Checklist (see Appendix H).

Optional cross-curricular connections. Each lesson included optional cross-curricular connections that teachers could use to connect the content to various subject areas, such as physical education, health, math, language arts, science, art, social-

emotional learning, social studies. Journal writing prompts were also available with each lesson, as were literature links. Teachers recorded the connections that they choose to use on a Participant Fidelity Checklist (see Appendix G).

Once a day challenges. Teacher participants were asked to complete daily challenges to reinforce their own understanding of lesson content as it relates to everyday work situations. Participants recorded challenges completed using the Participant Fidelity Checklist (see Appendix G).

Core practice. The Core Practice is a way to integrate mindfulness into the classroom setting. Teachers lead their students in three minutes of mindfulness practice three times per day. Mindfulness completed through the Core Practice includes focusing attention on a single resonating sound, as well as the breath. The observation checklist (see Appendix I) highlights the steps of implementing the Core Practice. Before asking teachers to lead their students in this practice, the practice was taught to students and modeled for teachers. The researcher also observed teacher participants' implementation of the Core Practice twice throughout the intervention and offered feedback to participants during these meetings, after the first observation. Participants recorded frequency of the Core Practice using the Participant Fidelity Checklist (see Appendix G).

Informal meetings. The researcher planned to meet with teacher participants in their respective teaching teams weekly for 10-15 minutes to offer support, preview upcoming activities, and collect fidelity checklists. The goal of these meetings was to answer any questions participants had and preview the upcoming week's activities. The researcher also kept track of meetings with teaching teams using the Researcher Fidelity Checklist (see Appendix H).

Post-survey. Following the intervention, participants in the treatment and comparison group completed separate post-surveys. Like the pre-survey measure, an email with a link to the web-based survey was emailed to participants. Both surveys asked participants to enter their same 4-digit identification number, and included the same sections and question items from the pre-survey. In addition, treatment participants were provided with a satisfaction survey entitled "Evaluating MindUP". The survey asked participants to rate the quality of the MindUP program on a 5-point Likert Scale, with "1" being "Poor" and "5" being "Excellent". Participants were also asked to rate mindfulness practice completed through the MindUP program as a strategy, using a 5-point Likert Scale with "1" being "Not helpful" and "5" being "Extremely helpful". In addition to rating scales, participants were asked three open-ended questions about: how likely they were to recommend the program, how likely there would be to continue to practice mindfulness, and factors that made it difficult to benefit from the practice. See Appendix E for a copy of the Satisfaction Survey.

For the comparison participants, a section entitled "General Questions" was added to the post-survey. These questions asked participants if they had practiced mindfulness with their students during the 2016-2017 school year, how often they engage in mindfulness practice with students, to describe what that practice looks like, and if a specific curriculum is in use. See Appendix K, for a sample of the "General Questions" section. Following winter break, two additional dates were added to the post-survey data collection period in order to increase the comparison group's response rate. One additional participant completed the survey during this time. At the conclusion of the

post-survey, there were eight completed surveys from treatment participants and seven from comparison.

Follow-up survey. A separate web link to a satisfaction survey was sent to treatment participants approximately one month following the post-survey measure (see Appendix F, Follow-up Survey). In an effort, to receive honest feedback about program success, this measure was anonymous, meaning that no IP addresses were collected, and participants were not asked to enter their four-digit identification code. Participants were asked to rate mindfulness practice as a strategy, using a 5-point Likert scale, 1 being "not helpful" and 5 being "extremely helpful". Participants were also asked if they had continued to use the Core Practice and how often they had used the practice. In addition, participants were asked open-ended questions about how the Core Practice supported their classroom, integration of mindfulness into the classroom, positive personal benefits of using mindfulness, any long-term benefits of the MindUP program, and any challenges to integrating mindfulness. All eight participants from the treatment school completed the survey. At the conclusion of the study, all participants from the treatment school remained along with seven participants from the comparison school. The response rate was approximately 79%.

Data Analysis

Following administration of the pre-post- survey, it was necessary to ensure that data were not missing. Missing data from participants may be reason to exclude responses. Soriano (2013) suggests that if data is consistently missing (exceeding 5%) for specific question items, then the researcher needs to understand the cause for missing data. After checking for complete responses, descriptive statistics, focusing on measures

of central tendencies, was used to analyze the data. In addition, Repeated Measures ANOVA tests, as well as Paired Samples T-Tests, were performed to identify any change related to mindfulness, as well as burnout, between pre-post-test scores. The difference in the means was then be compared between treatment and comparison groups. While it may be possible to determine the potential plausibility of program effects by dividing this difference by the average standard deviation, the limited number of available participants makes it difficult to achieve the statistical power needed to report small to moderate and even large effects (Lipsey, 1998). The statistical software, SPSS, was used to conduct these analyses.

Any qualitative data was coded using the verbatim technique, in which information directly tied to the research questions was noted and summarized (Soriano, 2013). Analysis using this technique prompted the researcher to look for patterns, as well as to acknowledge group consensus in response to questions and places of disagreement. While qualitative coding is largely subjective, it provided further insight into participant thoughts and attitudes related to the intervention and quantitative results.

Power. The effects of an intervention can be determined by dividing the difference in means of two groups by the average standard deviation between the groups and is necessary to isolate the statistical significance of treatment effects (Hill, Bloom, Black, & Lipsey, 2008). Hill et al. (2008) suggest standards to establish various effect sizes. An effect size of .2 is small, .5 moderate, and .8 or above, large. From the research, moderate to large effects (.52 to .79) have been found from mindfulness training completed outside of the classroom to increase mindfulness (Benn et al., 2012; Jennings et al., 2013; Roeser et al., 2013). While data related to the effectiveness of MindUP on

the outcome of teacher mindfulness is not yet available, a moderate effect size (.55) has been shown among one student sample (Schonert-Reichl et al., 2015).

Because the research about the effects of MindUP on teacher mindfulness is limited, G*Power, a statistical software was utilized to determine the sample size needed to produce enough statistical power to calculate treatment effects. The statistical test was set to a t-test with the alpha error probability set at .05 and the power at .8 (Lipsey, 1998). Based on the effects presented in previous research, an effect size between .5 and .8 would be ideal for this intervention (Benn et al., 2012; Jennings et al., 2013; Roeser et al., 2013; Schonert-Reichl et al., 2015). However, results indicate that achieving a large effect size of .8 requires 52 participants and a moderate effect size of .5 would require 128 participants. Therefore, given the limited number of available participants for this intervention, it will not be possible to determine an effect size. See Table 7 for a summary of data collected throughout the intervention.

Table 7

Data Collection Matrix: Research Questions

Research Questions	Indicator	Role of Indicator	Data Source(s)	Frequency	Responsibility
RQ 1.0 and 1.1	Mindfulness	Outcome: Dependent Variable	Five-Facet Mindfulness Scale	Pre- and Post-Intervention	Teachers in the Treatment and Comparison Groups
RQ 1.0 and 1.2	Satisfaction	Outcome: Dependent Variable	Satisfaction Surveys	Post and Follow-up	Teachers in the Treatment Group
RQ 2.0	Burnout	Outcome: Dependent Variable	Maslach Burnout Inventory	Pre- and Post-Intervention	Teachers in the Treatment and Comparison Groups
RQ 2.1	Student Behavior	Outcome: Dependent Variable	Overall Percentage of Points Earned on Student Point Sheets	Weekly	Teachers in the Treatment Group; Behavior Support Specialists in the Treatment and Comparison Groups

CHAPTER 5. FINDINGS AND DISCUSSION

Introduction

In the following chapter, results of the intervention will be presented, as well as a discussion of findings with theoretical and applied implications. Recommendations for future research and limitations of the study will also be discussed.

Results

Research Question 1.0 asked Does the MindUP curriculum program alter teachers' perceptions of mindfulness in a nonpublic special education school? This question was addressed through two sub-questions. The first, Research Question 1.1 asked if teachers reported a change in mindfulness ability using The Five Facet Mindfulness Questionnaire, which examines mindfulness ability through five categories: Observe, Describe, Act with awareness, Nonjudge, and Nonreact. Research Question 1.1 compared responses from teachers in the treatment condition with those in the comparison group who had not participated in the implementation of the intervention. This Research Question was answered using separate mixed method ANOVAs for an overall score and for each of the five Mindfulness Questionnaire subscales, central tendency statistics for this survey are presented in Table 8.

Results of the mixed model ANOVA (see Table 9) for the overall score indicated no significant effect between groups, $F(1, 13) = 0.00$, $p > .05$, no effect across time, $F(1, 13) = 1.16$, $p > .05$, and no significant interaction, $F(1, 13) = 1.16$, $p > .05$.

Results of the mixed model ANOVA (see Table 10) for the Observe subscale indicated a nonsignificant effect between groups, $F(1, 13) = 3.32$, $p = .091$ a statistically

nonsignificant effect across time $F(1, 13) = 3.74$, $p = .075$, and a significant interaction, $F(1, 13) = 7.84$, $p = .015$.

Results of the mixed model ANOVA (see Table 11) for the Describe subscale indicated no significant effect between groups, $F(1, 13) = 1.76$, $p > .05$, no effect across time, $F(1, 13) = 2.40$, $p > .05$, and no significant interaction $F(1, 13) = 1.80$, $p > .05$.

Results of the mixed model ANOVA (see Table 12) for the Nonjudge subscale indicated no significant effect between groups, $F(1, 13) = 0.02$, $p > .05$, no effect across time, $F(1, 13) = 0.01$ $p > .05$, and no significant interaction $F(1, 13) = 0.69$, $p > .05$.

Results of the mixed model ANOVA (see Table 13) for the Nonreact subscale indicated no significant effect between groups, $F(1, 13) = 0.14$, $p > .05$, no effect across time, $F(1, 13) = 0.01$, $p > .05$, and no significant interaction, $F(1, 13) = 1.35$, $p > .05$.

Results of the mixed model ANOVA (See Table 14) for the Act with awareness subscale also indicated no significant effect between groups, $F(1, 13) = 0.08$, $p > .05$, no effect across time, $F(1, 13) = 2.75$, $p > .05$, and no significant interaction, $F(1, 13) = 0.85$, $p > .05$.

Table 8

Mean FFMQ Scores from Repeated Measures ANOVA

Scale	Group					
	Treatment		Comparison		Total	
	Pre *M (SD)*	Post *M (SD)*	Pre *M (SD)*	Post *M (SD)*	Pre *M (SD)*	Post *M (SD)*
Overall	129.5 (18.5)	136.0 (17.9)	132.7 (9.8)	132.7 (11.7)	131.0 (14.7)	134.5 (14.9)
Observe	26.5 (4.8)	29.63 (3.1)	24.86 (3.6)	24.29 (4.0)	25.73 (4.2)	27.13 (4.4)
Describe	25.38 (5.5)	27.38 (6.1)	30 (5.0)	30.14 (5.4)	27.53 (5.6)	28.67 (5.8)
Nonjudge	29.00 (7.6)	27.75 (6.3)	27.43 (6.2)	28.43 (6.0)	28.23 (6.8)	28.07 (6.0)
Nonreact	22.00 (3.6)	23.13 (6.0)	23.86 (3.9)	22.86 (3.5)	22.87 (3.7)	23.00 (4.8)
Awareness	26.63 (4.0)	28.13 (4.8)	26.57 (3.4)	27.00 (4.6)	26.60 (3.6)	27.60 (4.6)

Table 9

Mixed Model ANOVA Results for the Overall FFMQ Score

Source	**df**	**MS**	**F**
Group	1	0.01	0.00
Error	13	396.53	
Time	1	78.87	1.16
Time * Group	1	78.87	1.16
Error	13	68.15	

Table 10

Mixed Model ANOVA Results for the Observe FFMQ Score

Source	**df**	**MS**	**F**
Group	1	91.00	3.32
Error	13	27.37	
Time	1	12.17	3.74
Time * Group	1	25.51	7.84*
Error	13	3.25	

*$p < .05$

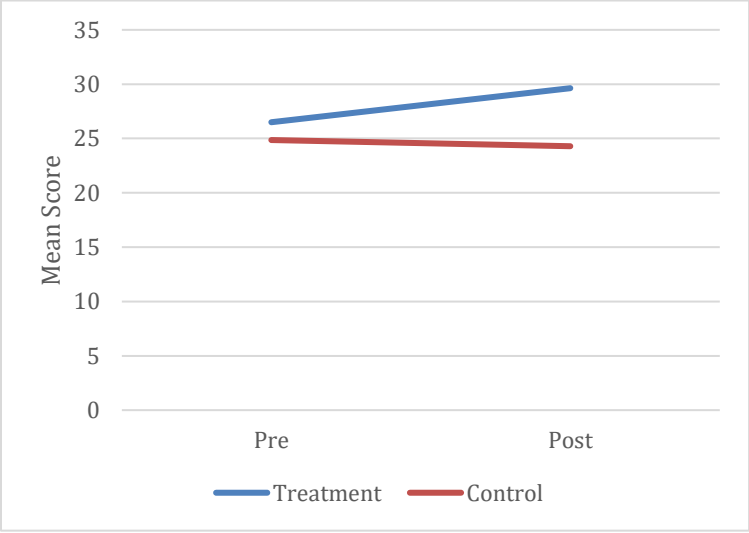

Figure 3. Significant interaction for Observe subscale across the intervention.

Table 11

Mixed Model ANOVA Results for the Describe FFMQ Score

Source	**df**	**MS**	**F**
Group	1	102.02	1.76
Error	13	58.01	
Time	1	8.57	2.40
Time * Group	1	6.44	1.80
Error	13	3.57	

Table 12

Mixed Model ANOVA Results for the Nonjudge FFMQ Score

Source	**df**	**MS**	**F**
Group	1	1.45	0.02
Error	13	73.71	
Time	1	0.12	0.01
Time * Group	1	9.45	0.69
Error	13	13.75	

Table 13

Mixed Model ANOVA Results for the Nonreact FFMQ Score

Source	**df**	**MS**	**F**
Group	1	4.72	0.14
Error	13	32.70	
Time	1	0.03	0.01
Time * Group	1	8.43	1.35
Error	13	6.26	

Table 14

Mixed Model ANOVA Results for the Act with Awareness FFMQ Score

Source	**df**	**MS**	**F**
Group	1	2.59	0.08
Error	13	33.20	
Time	1	6.94	2.75
Time * Group	1	2.14	0.85
Error	13	2.53	

Research Question 1.2 asked, how satisfied teachers were with the MindUP program, as measured by a survey. Teacher MindUP participants rated their satisfaction with the mindfulness curriculum immediately following the intervention and approximately one-month post-intervention. The surveys measuring satisfaction contained a combination of quantitative and qualitative question items. Teachers were

asked to rate their satisfaction with various curriculum components on a five-point scale with "1" being "Poor" and "5" being "Excellent": (see Table 15). All treatment participants rated the lessons, core practices, supplemental activities, and program overall as either "Very good" or "Excellent". The once a day challenges were rated as "Very good" or "Excellent" by 87.5% (*n* = 7) of participants, with only one participant rating the challenges as "Good" (12.5%, *n* = 1). Participants were also asked about how helpful mindfulness practice was for the school overall, the classroom, students, and teachers themselves, on a five-point scale with "1" being "Not helpful" and "5" being "Extremely helpful" (see Table 16). The majority of participants (87.5%, *n* = 7) indicated that mindfulness practice was "Very helpful" for the school. Seventy-five percent of participants (*n* = 6) indicated that mindfulness practice was "Very helpful" for classrooms and students. Half of participants indicated that mindfulness practice was "Very helpful" for teachers (*n* = 4), with one participant (12.5%) suggesting it was "Extremely helpful" and two participants (25%) indicating that the practice is "Somewhat helpful". One participant indicated that the practice was "Fairly helpful" (12.5%).

Table 15

Rating of Mindfulness Curriculum Components at Post-assessment

Satisfaction Items	Poor *N (%)*	Fair *N (%)*	Good *N (%)*	Very Good *N (%)*	Excellent *N (%)*
Lessons	0.0	0.0	0.0	6.0 (75.00)	2.0 (25.00)
Core Practices	0.0	0.0	0.0	4.0 (50.00)	4.0 (50.00)
Once a Day Challenges	0.0	0.0	1.0 (12.50)	3.0 (37.50)	4.0 (50.00)
Supplemental Activities	0.0	0.0	0.0	6.0 (75.00)	2.0 (25.00)
Program Overall	0.0	0.0	0.0	5.0 (62.50)	3.0 (37.50)

Table 16

Rating of Helpfulness of Mindfulness Practice at Post-assessment

Satisfaction Items	Not *N (%)*	Fairly *N (%)*	Somewhat *N (%)*	Very *N (%)*	Extremely *N (%)*
School	0.0	0.0	1.0 (12.50)	7.0 (87.50)	0.0
Classrooms	0.0	0.0	2.0 (25.00)	6.0 (75.00)	0.0
Students	0.0	0.0	2.0 (25.00)	6.0 (75.00)	0.0
Teachers	0.0	1.0 (12.50)	2.0 (25.00)	4.0 (50.00)	1.0 (12.50)

At follow-up, participants were asked again about the helpfulness of mindfulness practice (see Table 17). While many of the ratings remained the same, two participants (25%) rated mindfulness practice as "Extremely helpful" instead of "Very helpful". At post-assessment, mindfulness practice was not rated as "Extremely helpful" for classrooms or students, but at follow-up two participants (25%) changed their rating to "Extremely helpful". In addition, at post-assessment two participants (25%) rated the practice as "Somewhat helpful" for the classroom and students, but at follow-up there was only one participant who rated the program in this way (12.5%). The only category that was unchanged at follow-up was how the teachers rated the helpfulness of mindfulness practice for themselves.

On the same post and follow-up surveys described above, teachers were also asked open-ended questions (see Appendix L, Qualitative Data Tables). On the post-assessment, in response to how likely teachers would be to recommend the program to a colleague, all respondents (n = 7) stated that they would be likely to recommend the program, with about 71% (n = 5) suggesting that they would be "Very likely" or would

"Highly recommend" the program. One person skipped the question. In response to a question about the likelihood that participants would continue mindfulness practice within their classrooms, all participants stated that they would continue the practice (n = 8). At follow-up all participants reported continuing the Core Practice after the intervention had concluded at least on a daily or weekly basis with 38% of participants (n = 3) reporting that they continued to implement the practice more than once a day (see Table 18). When asked at follow-up if they have continued to integrate mindfulness into their classroom in any other ways, 60% (n = 5) mentioned that they have continued to use terminology or the language of the curriculum.

As part of the post-assessment participants were asked if any factors made it difficult for them, their students, or the classroom overall to benefit from regular mindfulness practice, a common challenge was time or scheduling challenges (71%, n = 5). At follow-up, when asked to describe any challenges to integrating mindfulness throughout the school/work day, 75% (n = 6) of participants cited time-related challenges. Respondents said there were "So many other tasks" and "Too little time" and they "Often have their attention pulled in several different places". At follow-up, 38% of participants (n = 3) also cited challenges related to student motivation and/or buy-in as it relates to regular mindfulness practice.

Table 16

Rating of Helpfulness of Mindfulness Practice at Post-assessment

Satisfaction Items	Not *N (%)*	Fairly *N (%)*	Somewhat *N (%)*	Very *N (%)*	Extremely *N (%)*
School	0.0	0.0	1.0 (12.50)	7.0 (87.50)	0.0
Classrooms	0.0	0.0	2.0 (25.00)	6.0 (75.00)	0.0
Students	0.0	0.0	2.0 (25.00)	6.0 (75.00)	0.0
Teachers	0.0	1.0 (12.50)	2.0 (25.00)	4.0 (50.00)	1.0 (12.50)

Table 17

Rating of Helpfulness of Mindfulness Practice at Follow-up

Satisfaction Items	Not *N (%)*	Fairly *N (%)*	Somewhat *N (%)*	Very *N (%)*	Extremely *N (%)*
School	0.0	0.0	1.0 (12.50)	5.0 (62.5)	2.0 (25.00)
Classroom	0.0	0.0	1.0 (12.50)	5.0 (62.5)	2.0 (25.00)
Students	0.0	0.0	1.0 (12.50)	5.0 (62.5)	2.0 (25.00)
Teachers	0.0	1.0 (12.50)	2.0 (25.00)	4.0 (50.00)	1.0 (12.50)

Table 18

Continuation of the Core Practice at Follow-up

Question	Once in a While *N (%)*	Weekly *N (%)*	Daily *N (%)*	More than Once a Day *N (%)*
If you have continued the "core practice" with students, how often do you lead or participate in leading that practice?	0.0	3.0 (37.50)	2.0 (25.00)	3.0 (37.50)

At follow-up participants were also asked to describe how the Core Practice or mindfulness in general has supported their classroom. All participants volunteered that the practice was a helpful strategy for their students, with the majority of teachers suggesting that the strategy is good for transitions throughout the day (88%, $n = 7$). One teacher pointed out that it feels like a "Recalibration" while others said that the practice helped students to "Regroup" or that it helped to "Reset" the classroom. One teacher said that the practice "Promotes positive classroom culture" while another mentioned that the practice helps to "Set the tone for the day". When asked at follow-up about potential positive personal benefits of using mindfulness throughout the work day, several participants suggested that mindfulness practice in their classrooms helped them to pause and breathe. A common theme among responses was that the practice was calming and allowed for reflection and/or a "Reset" throughout the day. When asked if they see any long-term benefits of the curriculum program used, all participants suggested that students benefited from the program. Twenty-five percent of participants ($n = 2$) volunteered that the use of the program helped teachers and students to pause and reflect (see Appendix L, Qualitative Data Tables).

Research question 2.0 asked if teachers reported a change in burnout according to the Emotional exhaustion and Personal accomplishment subscales of the MBI-ES, when compared with teachers who did not participate in the curriculum. This Research Question was answered using separated mixed method ANOVAs for both burnout subscales, central tendency statistics for this survey are presented in Table 19.

Results of the mixed model ANOVA (see Table 20) for the Emotional exhaustion subscale indicated no significant effect between groups, $F(1, 13) = 0.09$, $p > .05$, no

effect across time, $F(1, 13) = 1.79$, $p > .05$, and no significant interaction, $F(1, 13) = 2.46$, $p > .05$.

Results of the mixed model ANOVA (see Table 21) for the Personal accomplishment subscale indicated no significant effect between groups, $F(1, 13) = 0.23$, $p > .05$, no effect across time, $F(1, 13) = .0.37$, $p > .05$, and no significant interaction, $F(1, 13) = .0.21$, $p > .05$.

Table 19

Mean MBI-ES Scores from Repeated Measures ANOVA

Scale	Group					
	Treatment		Comparison		Total	
	Pre	Post	Pre	Post	Pre	Post
	M (SD)	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*	*M (SD)*
EE	24.88 (12.2)	30.25 (10.2)	26.14 (11.6)	25.71 (10.0)	25.47 (11.5)	28.13 (10.0)
PA	41.00 (3.2)	41.13 (5.2)	39.57 (4.7)	40.42 (4.9)	40.33 (3.9)	40.80 (4.9)

Note: A score of 27 or over is considered high for Emotional exhaustion (EE), 17-26 is moderate, and 0-16 is low. A score of 37 or over is considered high for Personal accomplishment (PA), 31-36 is moderate, and 0-30 is low.

Table 20

Mixed Model ANOVA Results for the Emotional Exhaustion MBI Score

Source	**df**	**MS**	**F**
Group	1	19.93	0.09
Error	13	219.45	
Time	1	45.67	1.79
Time * Group	1	62.87	2.46
Error	13	25.52	

Table 21

Mixed Model ANOVA Results for the Personal Accomplishment MBI Score

Source	**df**	**MS**	**F**
Group	1	8.43	.231
Error	13	36.42	
Time	1	1.80	0.37
Time * Group	1	1.00	0.21
Error	13	4.84	

Research Question 2.1 asked if teachers at a nonpublic special education school report a change in student behavior as measured by an increase in the overall percentage of points earned on student communication sheets before, during, and following the intervention. Figure 4 displays average points earned by grade range before, during, and after the intervention. Scores across grade range generally remained unchanged. A Repeated Measures ANOVA for overall behavior points earned, central tendency statistics are presented in Table 22. Overall behavior generally remained unchanged.

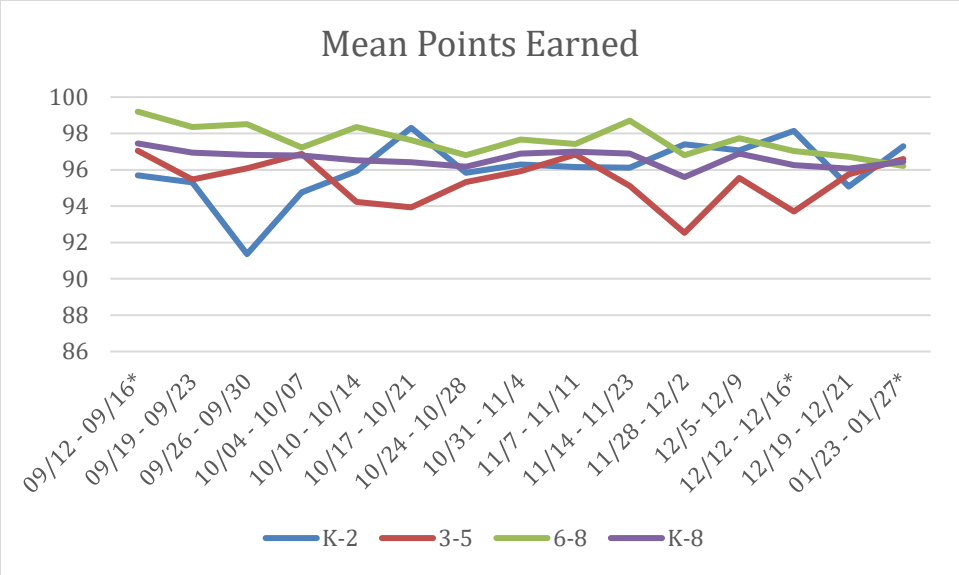

Figure 4. Average behavior points by grade range earned across the intervention. The asterisks next to dates represent the pre-, post-, and follow-up benchmarks.

Table 22

Mean Behavior Points Earned from Repeated Measures ANOVA

Grade Range	Week Before Intervention *M (SD)*	Week Ending Intervention *M (SD)*
K-2	95.7	98.2
3-5	97.1	93.7
6-8	99.2	97.04
Total	97.45 (1.47)	96.26 (1.89)

Fidelity of Implementation

For the purpose of this intervention, high fidelity was achieved when participants completed at least 75% of program components (i.e., the core practices and once a day challenges) throughout the course of the intervention. In terms of lesson delivery, the researcher who was also the school's SLS, administered the lessons to each classroom.

The percentage of program components completed across all classrooms ranged from 83% to 89%. Because the curriculum was not designed specifically for students with special needs, some lesson activities were skipped or modified and as a result the program fidelity was slightly lower within these classrooms.

Participants were given weekly checklists to reflect the completion of various program components (see Appendix G). All participants achieved high fidelity scores 81% and above when implementing regular mindfulness practice. In terms of the optional Once a Day Challenges, overall program averages ranged from 47% to 87%, with the majority of participants (63%, $n = 5$) achieving above 75%. Difficulty completing the Once a Day Challenges on the part of a few participants could explain why some participants did not rate the program as being as helpful for themselves as they rated for their students, classrooms, and the school. All participants utilized optional cross curricular connections, with journal writing prompts reported as the most common; however, the amount of connections used varied greatly among participants.

Participants were observed two times throughout the intervention in order to assess the fidelity of mindfulness practice. A checklist was created (see Appendix I) to measure adherence to the Core Practice procedure. The observation checklist was reviewed with participants, the practice was modeled for participants by the researcher, and verbal feedback following the first observation was provided. Initially, all participants demonstrated high fidelity of implementation with the lowest score being 86%. At the conclusion of the intervention, the majority of participants completed the practice with their students with 100% fidelity (75%, $n = 6$). Two participants scored

71% and 86%, which may suggest that for some participants the practice became rushed or altered by the end of the intervention.

The theory of treatment model outlined the importance of social support and as such the researcher planned to meet with classroom teams on a weekly basis following an initial meeting to review program components and procedures. At the beginning of the intervention, the researcher successfully met with all teaching teams in order to provide a verbal overview of the curriculum, materials, preview upcoming lessons and activities, discuss logistics, and answer questions. Brief check-in meetings continued throughout the course of the intervention. At times meetings had to be rescheduled or were rushed because of scheduling conflicts. There were two weeks when meetings were not able to be held due to scheduling conflicts. Fidelity data was still collected during these weeks.

Discussion of Findings

Research Question 1.0 asked if the implementation of MindUP altered teachers' perceptions of mindfulness and Research Question 1.1 asked if teachers reported a change in mindfulness ability using the FFMQ. A statistically significant interaction was observed among treatment participants from pre- to post- assessment for the Observe subscale of the FFMQ (see Figure 4). In addition, while an increase was observed for treatment group participants for the Observe subscale, the comparison groups' scores remained the same. Baer et al. (2008) suggest that the Observe subscale "…includes noticing or attending to internal and external experiences, such as sensations, cognitions, emotions, sights, sounds, and smells" (p.330). Baer et al. (2008) found that the Observe subscale differs from the other subscales in terms of the way it functions as a facet of overall mindfulness. More specifically, an isolated increase in the Observe subscale,

especially among populations that lack prior experience with meditation, may be associated with negative participant outcomes (Baer et al., 2008). In other words, if participants' Observe scores point to an increase in their ability to notice inner and outer experiences, but increases are not observed in their abilities to describe experiences, approach them in non-judgmental and non-reactive ways, and act with awareness, then their overall mindfulness abilities are impeded. In addition, Baer et al. (2008) assert that an increase in this subscale apart from the other subscales "…was unexpectedly found to be modestly but positively correlated with several maladaptive constructs, including dissociation, absentmindedness, psychological symptoms, and thought suppression" (p.331). In the case of this study, all other subscales were not significantly significant. Although participants were not asked about their prior experience with mindfulness or meditation, Baer et al.'s (2008) findings may indicate that the isolated increase in the Observe subscale equates to increased engagement in maladaptive coping responses among treatment group participants. At the same time, the study period did not last long and it is not possible to make any conclusions about participants coping abilities based on this finding alone.

Research Question 1.2 asked how satisfied participants were with the program. Based on the satisfaction surveys, it is clear that participants regarded the program highly. Most notably, ratings of mindfulness practice increased on the anonymous follow-up satisfaction survey compared to the satisfaction survey administered as part of the post-assessment. As mentioned, all participants continued to implement the Core Practice post-intervention. Participants also cited a variety of program benefits at follow-up around themes such as, supporting transitions for students, building classroom

communities, and increasing awareness, reflection, and relaxation. While these benefits mostly focused on positive outcomes related to students, classrooms, and the school overall, participants also noted personal gains from the program. For example, one participant stated the following about the program, “It helps me to be more aware of my colleagues needs and milestones, because I'm paying closer attention. This awareness is helping build more collaborative relationships.” Overall the qualitative data suggests that participants viewed the program and mindfulness practice positively. In addition, the the voluntary continuation of mindfulness practice post-intervention across all participants suggests that the program was well-received.

When asked about challenges related to implementing program components, a common theme across both satisfaction surveys, was time-related challenges. In the post-survey, most participants (71%, $n = 5$) pointed to “Changes in the daily schedule” or “Time constraints” when asked about factors that made it difficult for them to benefit from regular mindfulness practice. This frustration continued into the follow-up survey. While a few participants described difficulty with student motivation and buy-in (38%, $n = 3$) at follow-up, a more common response (75%, $n = 6$) was that it was difficult to implement mindfulness practice multiple times per day and/or other program components because participants felt “Rushed”, had “So many tasks to complete”, “Too little time”, or their “Attention was pulled in several different places at the same time”. While teachers were satisfied overall with the program, the qualitative data about implementation challenges and limitations is an interesting finding.

Research Question 2.0 asked if teachers reported a change in burnout according to the Emotional exhaustion and Personal accomplishment subscales of the MBI-ES when

compared with teachers who had not participated in the curriculum program. At the beginning of the school year, teachers from both conditions reported moderate levels of Emotional exhaustion. Following the intervention, there was no significant change in terms of Emotional exhaustion. Because the researcher also worked in the treatment school and was familiar with the research environment, she was aware of community and environmental changes. The lack of a control group in this study, small sample size, and similarities in groups suggest that any differences may be due to error. Given the positive appraisals of the program from the post- and follow-up satisfaction surveys, as well as the high fidelity scores achieved, the intervention may have had little influence in terms of participants' Emotional exhaustion levels. Levels of Personal accomplishment remained high throughout the intervention, yet there was no significant change.

Research Question 2.1 asked if teachers reported a change in student behavior as measured by an increase in the overall percentage points earned on student point sheets. Initially, it was thought that behavior data would help to illustrate teachers' experience of student behavior; however, concerns related to missing data and non-standardized reporting across teachers and grades bring to question the data's validity. It is possible that the missing data and non-standardized reporting point to time-related issues or challenges with school-wide behavior system implementation and/or data collection. In addition, the number of students that met exclusion criteria because of more severe problem behaviors and subsequent interventions might have been a contributing factor to teachers' emotional exhaustion. In addition, a few students met exclusion criteria because they were considered mid-year enrollments. Because the available sample size varied

from week to week, data did not show consistent trends in student behavior and did not fully capture the classroom environment or the experience of teachers.

Future Research

What is notable about this study is that teachers within a special education setting clearly identified a common challenge related to the implementation of the intervention, which is that of time-related challenges. Teachers' experience of the number of tasks that must be completed throughout the day, their need to continually shift their attention, and feelings of time constraints should not be overlooked. This type of stress, which was identified as a major stressor in the initial review of the literature and from needs assessment findings, may make it difficult for teachers to effectively adopt new programs and practices, as well as manage and respond to shifting expectations. It is possible that although time-related concerns were listed as the third most common stressor in the needs assessment, this type of stressor negatively influences teachers' ability to manage student behavior and the amount of paperwork (the first two most common stressors). Future research on how to better support the challenges special educators experience related to time-related concerns should be investigated.

In the literature review, mindfulness practice overall was shown to effectively support teacher coping in response to stress (Benn et al., 2012; Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013). However, many of the studies cited were conducted outside of the classroom environment. This study attempted to find a way to support teachers within the classroom environment, for several reasons. First, relevant literature has pointed to the dynamic nature of the classroom and the importance of considering the whole environment when putting interventions into place. Second, it was

thought that by instituting regular mindfulness practice on the part of teachers and students, classroom environments would improve, as would student behavior, which would in turn support teachers. Third, because teachers reported time-related concerns in the need assessment there was an assumption that an intervention that required a substantial portion of their time, for example full day professional development sessions, may not be the most effective. Finally, contextual factors played a role in trying to determine the most feasible and affordable option to present to stakeholders, as a result more extensive mindfulness-based intervention options were not proposed.

Current research suggests that the isolated increase in the Observe subscale from the FFMQ may be associated with negative psychological outcomes (Baer et al., 2008). The positive program appraisals cited in this study suggest that mindfulness-based curriculum programs may have the potential support the classroom environment; however, teachers may benefit from more intensive mindfulness interventions focused on their needs specifically. As a result, it may be advantageous, to consider the importance of budgeting time and money to provide teachers with more focused interventions around mindfulness in order to build their ability to move beyond simply observing their experiences.

Future research should also be conducted to identify additional avenues of support for teachers' emotional exhaustion, as well as support mechanisms that may serve to decrease rates of teacher burnout, especially within special education settings. Given that a common challenge reported in this dissertation is that of time-related challenges, there may be some benefit to exploring ways to support this specific stressor. Teachers' overall emotional experience is critical in terms of increasing job satisfaction and decreasing the

potential for burnout (Hülsheger et al., 2013). This is especially true in special education settings where teachers have reported high levels of stress. Discovering ways to increase use of positive coping strategies is key.

Recommendations for Practice and Literature Connections

Watlington, Shockley, Guglielmino, & Felsher (2010) point out that increased teacher attrition can negatively influence school outcomes and can lead to diminished performance of existing staff and students. This is particularly true for special education populations, because the time and funding needed to hire, train, and retain high-quality teachers who meet national and state standards of quality can be difficult (Watlington et al., 2010). In addition, investing in teachers' job satisfaction and occupational commitment by increasing resources needed to support teacher stress has the potential to benefit financial operations in the long-term (Watlington et al., 2010).

In terms of the school context where the intervention occurred, a fairly new for-profit school, Rocco (2012) states "…a school with a commitment to cultivating mindfulness among staff and students remain a rare jewel; and the field of mindfulness in education is still in its infancy" (p. 4). For-profit institutions are in a unique position in terms of their ability to implement progressive changes quickly and appeal to potential consumers (Bennett, Lucchesi, Vedder, 2010). According to Rocco (2012), mindfulness is a new and promising practice in education and it may be worthwhile for schools to explore the financial benefits that focusing on developing teachers' (and students') mindfulness abilities could bring in terms of not only retention, but also marketability.

Moreover, when changes or even interventions meant to support teachers are imposed on them and they believe themselves powerless, the additional resources may

inadvertently lead to increased frustration and stress (Margolis & Nagel, 2006). While it is important to provide options for professional development and ongoing support, building teacher autonomy and creating safe places for teachers to speak out on behalf of their professional and personal needs is also imperative. It is necessary to consider the unique needs of an organization and the individual actors who work within a specific setting (Crozier & Friedberg, 1980). In a fairly new school organization, like the one where the intervention took place, boundaries are fluid. It can therefore be difficult for teachers to know how to ensure that their voices are represented. Creating clear ways to involve teachers in decision-making centered around their needs and professional experience is essential.

When exploring any intervention related to mindfulness it is necessary that teachers are involved in professional development decisions, especially because the goal is to offer them increased support and helpful coping mechanisms. As previously mentioned, when an intervention is forced on teachers they may feel powerless. Those negative feelings have the potential to negate the purpose of the support- to increase coping ability needed to deal with stress (Evans, Thornton, & Usinger, 2012). Therefore, teacher buy-in and participation around the development of more extensive mindfulness intervention options may increase any positive effects, while also opening the door for teachers to suggest alternative courses of action to gain additional resources and support.

Connections to Theoretical Framework and Conclusions

The coping strategies teachers use in response to stress have the potential to ease their stress or exacerbate it (Lewis et al., 2011). Austin et al. (2005) suggests that teachers often choose coping strategies that worsen their stress and increase frustration. The

experience of stress is complex and varies from person to person (Lazarus, 1991; Phelps, 2006). It is helpful to identify common stressors in order to reduce common challenges experienced by teachers. While doing so, it is also important to increase teachers' perception of available resources (Lambert et al., 2001; Lambert et al., 2009). While the inner lives of teachers are difficult to measure, unaddressed stress limits teachers' ability to proactively model social-emotional regulation to their students (Jennings et al., 2013). In order to successfully implement any social-emotional learning program, teachers must be able to demonstrate self-awareness and self-regulatory behavior (Roeser et al., 2013; Schonert-Reichl et al., 2015).

Time-related concerns are cited as a common stressor for teachers (Austin et al., 2005). When teachers experience heightened stress responses neurologically, it is difficult for them to pause and respond to situations in a logical way (Phelps, 2006). Negative coping responses, such as experiential avoidance, have been linked to higher rates of burnout (Lewis et al., 2011; Rice, 2001). Mindfulness practice potentially reduces experiential avoidance, (Hinds et al., 2012) provided that teachers are provided with ample time and space to learn and practice mindfulness. Among other positive outcomes, mindfulness has been shown to increase teacher awareness, attention, emotional regulation, and decrease stress levels and feelings of burnout (Benn et al., 2013; Flook et al., 2013; Jennings et al., 2013; Roeser et al., 2013). Baer et al. (2008) conceptualize mindfulness as a multi-faceted construct. It is not enough to simply be aware of one's experience, rather in order for mindfulness to be helpful, it is necessary to label and respond to that awareness in a nonjudgmental and nonreactive way- to act with awareness (Baer et al., 2008). Interventions meant to support students and classroom environments

as a whole, often begin with teachers. Supporting long-term meaningful practice for teachers means understanding how to best support the dynamic relationships between their personal competencies, behaviors, and the ever-changing environments in which they work (Bandura, 1986).

Limitations

This study represents a specific special education setting. While the response rate was high within the study setting, the overall sample size was small. As a result, study findings are not generalizable to the larger population. In addition, while the study consisted of both quantitative and qualitative data, the data was all self-reported. Future studies should include multiple measures to increase the validity of results.

Because many families in the research context pay privately for the school, and families were aware of the use of mindfulness throughout the school day, it is possible that teachers felt outside pressure from the families of their students to continue with the practice. While this feeling was not reported by any study participants and the follow-up satisfaction survey was anonymous, it is important to note as a possibility. Along the same lines, participants had a professional relationship with the researcher. Within this setting colleagues are supportive of one another and participants may have responded at least qualitatively in a way that exaggerated their positive feelings. In response to this possibility, the follow-up survey was collected anonymously in order to minimize social desirability.

In terms of the curriculum program used, because it was not designed specifically for students with special needs, the researcher observed that at times the content was too abstract for some students. The curriculum included a lot of verbal instruction and/or

discussions, which can be challenging for students with communication challenges. As a result, some lesson activities intended for a slightly younger grade range were used for older students. For example, a mixed grade classroom that serves predominately 3rd - 5th grade students needed to use some lesson activities from the K - 2nd curriculum. Fortunately, the curriculum across all grade ranges followed the same format and focused on the same content. Therefore, it was easy to modify or enrich activities to meet the developmental needs of different age groups. As a result, students were still able to access lesson goals and objectives across the intervention even with some modifications. It is however important to consider the limitations of using a universal curriculum program with a specific population of learners.

Another limitation of the study is that the school where the intervention occurred historically implements social learning programming. Even though alternative social learning curriculum programs were not formally in use during the study at the treatment location, teachers may have continued integrating aspects of alternative curriculum programs. Similarly, the SLS or other related services professionals may have needed to provide individual or small group instruction to students using another curriculum resource. In addition, because of the nature of the school, it is common for teachers to set intentions at the beginning of lessons in terms of what students are working to earn at the end of a lesson. Therefore, various behavior systems and goal structures were in place during the implementation of the curriculum program. Throughout the intervention, there were also times when students missed lesson content, which may have influenced their progress in terms of understanding lesson components.

Furthermore, teachers had varying levels of participation in the lessons themselves. Some teachers seemed highly engaged while others seemed pre-occupied or needed to support a student with behavior challenges unexpectedly. One teacher was not able to participate in lessons because of a scheduling conflict and instead reviewed missed information during informal meetings. Overall involvement varied from teacher to teacher.

REFERENCES

Akin, U. (2014). Self-compassion as a predictor of proactivity. *International Online Journal of Educational Sciences, 6*(1), 103-111. doi:10.15345/iojes.2014.01.011

Albrecht, N. (2014). Wellness: A conceptual framework for school-based mindfulness programs. *International Journal of Health, Wellness & Society, 4*(1), 21-36. Retrieved from Academic Search Complete. (Accession No. 95705447)

Austin, V., Shah, S., & Muncer, S. (2005). Teacher stress and coping strategies used to reduce stress. *Occupational Therapy International, 12*(2), 63-80. Retrieved from CINAHL Plus with Full Text. (Accession No. 2009021565)

Baer, R. A., Smith, G. T., Lykins, E., Button, D., Krietemeyer, J., Sauer, S., Walsh, E., Duggan D. M., & Williams, M. G., (2008). Construct validity of the five facet mindfulness questionnaire in meditating and nonmeditating samples. *Assessment, 15*, 329-342.

Baer, R. A., Smith, G. T., Hopkins, J., Krietemeyer, J., & Toney, L. (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment*, 13, 27-45.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs, NJ: Prentice-Hall.

Benn, R., Akiva, T., Arel, S., & Roeser, R. W. (2012). Mindfulness training effects for parents and educators of children with special needs. *Developmental Psychology, 48*(5), 1476-1487. doi:10.1037/a0027537

Bennett, D., Lucchesi, A., & Vedder, R. (2010). *For-profit higher education: Growth, innovation and regulation.* Washington, DC: Center for College Affordability and Productivity.

Billingsley, B. S. (2004). Promoting teacher quality and retention in special education. *Journal of Learning Disabilities, 37*(5), 370-376. Retrieved from Academic Search Complete. (Accession No. 13088946)

Birnie, K., Speca, M., & Carlson, L. E. (2010). Exploring self-compassion and empathy in the context of mindfulness-based stress reduction (MBSR). *Stress and Health*, *26*(5), 359-371.

Black, D., & Fernando, R. (2014). Mindfulness training and classroom behavior among lower- income and ethnic minority elementary school children. *Journal of Child & Family Studies, 23*(7), 1242-1246. doi:10.1007/s10826-013-9784-4

Cachia, R. L., Anderson, A., & Moore, D. W. (2016). Mindfulness, Stress and Well-Being in Parents of Children with Autism Spectrum Disorder: A Systematic Review. *Journal of Child and Family Studies*, *25*(1), 1-14.

CASEL. (2012). Effective social and emotional learning programs preschool and elementary school edition. Retrieved from http://www.casel.org/preschool-and-elementary-edition-casel-guide/.

Chang, M. (2009). An appraisal perspective of teacher burnout: Examining the emotional work of teachers. *Educational Psychology Review, 21*(3), 193-218. doi: 10.1007/s10648-009-9106-y

Collie, R. J., Shapka, J. D., & Perry, N. E. (2012). School climate and social-emotional learning: Predicting teacher stress, job satisfaction, and teaching efficacy. *Journal of Educational Psychology, 104*(4), 1189-1204. doi: 10.1037/a0029356

Creswell, J.W., & Plano Clark, V.L. (2011). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage

Crozier, M., & Friedberg, E. (1980). *Actors and systems: The politics of collective action* (A. Goldhammer, Trans.). Chicago, IL: University of Chicago Press.

Evans, L., Thornton, B., & Usinger, J. (2012). Theoretical frameworks to guide school improvement. *National Association of Secondary School Principals (NASSP), 96*, 154-171. doi:10.1177/0192636512444714

Flook, L., Goldberg, S. B., Pinger, L., Bonus, K., & Davidson, R. J. (2013). Mindfulness for teachers: A pilot study to assess effects on stress, burnout, and teaching efficacy. *Mind, Brain, and Education, 7*(3), 182-195. doi: 10.1111/mbe.12026

Flook, L., Goldberg, S. B., Pinger, L., & Davidson, R. J. (2015). Promoting prosocial behavior and self-regulatory skills in preschool children through a mindfulness-based kindness curriculum. *Developmental Psychology, 51*(1), 44-51. doi: 10.1037/a0038256

Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology, 50*(3), 571-579. doi:10.1037/0022-3514.50.3.571

Gersten, R., Fuchs, L. S., Compton, D., Coyne, M., Greenwood, C., & Innocenti, M. S. (2005). Quality indicators for group experimental and quasi-experimental

research in special education. *Exceptional Children, 71*(2), 149–164. doi: 10.1177/001440290507100202

Goddard, R. D., & Goddard, Y. L. (2001). A multilevel analysis of the relationship between teacher and collective efficacy in urban schools. *Teaching and Teacher Education, 17*(7), 807-818. doi:10.1016/S0742-051X(01)00032-4

Hall, C. W., Row, K. A., Wuensch, K. L., & Godley, K. R. (2013). The role of self-compassion in physical and psychological well-being. *The Journal of psychology*, *147*(4), 311-323.

Henry (2010). Comparison group designs. In J. Wholey, H. Harty, & K. Newcomer (Eds.), *Handbook of practical program evaluation* (pp.125-143). San Francisco: Jossey-Bass.

Hill, C. J., Bloom, H. S., Black, A. R., & Lipsey, M. W. (2008). Empirical benchmarks for interpreting effect sizes in research. *Child Development Perspectives, 2*, 172–177. doi:10.1111/j.1750-8606.2008.00061.x

Hinds, E., Jones, L. B., Gau, J. M., Forrester, K. K., & Biglan, A. (2015). Teacher distress and the role of experiential avoidance. *Psychology in the Schools, 52*(3), 284-297. doi:10.1002/pits.21821

Hülsheger, U. R., Alberts, H. J., Feinholdt, A., & Lang, J. W. (2013). Benefits of mindfulness at work: the role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology*, *98*(2), 310.

Jeffcoat, T., & Hayes, S. C. (2012). A randomized trial of ACT bibliotherapy on the mental health of K-12 teachers and staff. *Behaviour Research & Therapy, 50*(9), 571-579. doi:10.1016/j.brat.2012.05.008

Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by cultivating awareness and resilience in education (CARE): Results of a randomized controlled trial. *School Psychology Quarterly, 28*(4), 374-390. doi:10.1037/spq0000035

Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of educational research*, *79*(1), 491-525.

Joëls, M., Karst, H., Alfarez, D., Heine, V. M., Qin, Y., Van Riel, E., Verkuyl, M., Lucassen, P. J., & Krugers, H. J. (2004). Effects of chronic stress on structure and cell function in rat hippocampus and hypothalamus. *Stress: The International Journal on the Biology of Stress, 7*(4), 221-231. doi:10.1080/10253890500070005

Kretlow, A., & Blatz, S. (2011). The ABCs of evidence-based practice for teachers. *TEACHING Exceptional Children, 43*(5), 8-19. doi:10.1177/0040059914531389

Lambert, R.G., Abbott-Shim, M., & McCarthy, C.J. (2001). *Classroom appraisal of resources and demands, preschool version*. Charlotte, NC: The Center for Educational Evaluation and Measurement.

Lambert, R. G., McCarthy, C., O'Donnell, M., & Wang, C. (2009). Measuring elementary teacher stress and coping in the classroom: Validity evidence for the classroom

appraisal of resources and demands. *Psychology in the Schools, 46*(10), 973-988. doi: 10.1002/pits.20438

Lazarus, R. S. (1991). Progress on a cognitive-motivational-relational theory of emotion. *American Psychologist, 46*(8), 819-834. doi:10.1037/0003-066X.46.8.819

Leviton, L. C., & Lipsey, M. W. (2007). A big chapter about small theories: Theory as method: Small theories of treatments. *New Directions for Evaluation, 2007*(114), 27–62. doi:10.1002/ev.224

Lewis, R., Roache, J., & Romi, S. (2011). Coping styles as mediators of teachers' classroom management techniques. *Research in Education, 85*(1), 53-68. Retrieved from Eric. (Accession No. EJ961133)

Lipsey, M. (1998). Design sensitivity: Statistical power for applied experimental research. In L. Bickman and D. J. Rog (Eds.), *Handbook of applied social research method*s (pp. 39-68). Thousand Oaks: Sage.

Margolis, J., & Nagel, L. (2006). Education reform and the role of administrators in mediating teacher stress. *Teacher Education Quarterly, 33*(4), 143-159. Retrieved from http://www.jstor.org/stable/23478876.

Maslach, C. (2003). Job burnout: New directions in research and intervention. *Current Directions in Psychological Science (Wiley-Blackwell), 12*(5), 189. doi:10.1111/1467-8721.01258

Maslach, C., Jackson, S. E., & Schwab, R. L. (1986). *MBI-Educators Survey (MBI-ES): An adaptation of the original measure for use with educators*. Retrieved from http://www.mindgarden.com/117-maslach-burnout-inventory

Mehrenberg, R. L. (2013). Red tape and green teachers: The impact of paperwork on novice special education teachers. *International Journal of Special Education,28*(1), 80-87. Retrieved from Education Full Text. (Accession No. 92032679)

Mendelson, T., Greenberg, M. T., Dariotis, J. K., Gould, L. F., Rhoades, B. L., & Leaf, P. J. (2010). Feasibility and preliminary outcomes of a school-based mindfulness intervention for urban youth. *Journal of Abnormal Child Psychology, 38*(7), 985-994. Retrieved from http://dx.doi.org/10.1007/s10802-010-9418-x

Nelson, M. C., Cordray, D. S., Hulleman, C. S., Darrow, C. L., & Sommer, E. C. (2012). A procedure for assessing intervention fidelity in experiments testing educational and behavioral interventions. *The Journal of Behavioral Health Services & Research, 39*, 374–396. doi:10.1007/s11414-012-9295-x

Obradovi, J., Bush, N. R., Stamperdahl, J., Adler, N. E., & Boyce, W. T. (2010). Biological sensitivity to context: The interactive effects of stress reactivity and family adversity on socioemotional behavior and school readiness. *Child Development, 81*(1), 270-289. doi:10.1111/j.1467-8624.2009.01394.x

O'Leary, Z. (2012). *The essential guide to doing research* (2nd ed). London, UK: Sage Publications.

Pearson, L. C., & Moomaw, W. (2005). The relationship between teacher autonomy and stress, work satisfaction, empowerment, and professionalism. *Educational Research Quarterly, 29*(1), 38-54. Retrieved from http://www.jstor.org/stable/27548158.

Phelps, E. A. (2006). Emotion and cognition: Insights from studies of the human amygdala. *Annual Review of Psychology, 57*, 27-53. doi:10.1146/annurev.psych.56.091103.070234

Prakash, R. S., Hussain, M. A., & Schirda, B. (2015). The role of emotion regulation and cognitive control in the association between mindfulness disposition and stress. *Psychology & Aging, 30*(1), 160-171. doi:10.1037/a0038544

Rice, K. G., & Lapsley, D. K. (2001). Perfectionism, coping, and emotional adjustment. *Journal of College Student Development, 42*(2), 157. Retrieved from http://search.proquest.com.proxy1.library.jhu.edu/docview/195181117?accountid=11752.

Rocco, S. (2012). Mindfulness for well-being in schools a brief survey of the field. *Redress*, 21(3), 1-6.

Rock, D. and Cox, C. (2012). SCARF in 2012: updating the social neuroscience of collaborating with others, Neuroleadership Journal 4, 1-14. Retrieved from ftp://dns1.banffcentre.ca/LD/LtCArticle_SCARF_2012.pdf

Roeser, R. W., Schonert-Reichl, K., Jha, A., Cullen, M., Wallace, L., Wilensky, R., Oberle, E., Thomson, K., Taylor, C., Harrison, J. (2013). Mindfulness training and reductions in teacher stress and burnout: Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology, 105*(3), 787-804. doi:10.1037/a0032093

Rotter, J. B. (1975). Some problems and misconceptions related to the construct of internal versus external control of reinforcement. *Journal of Consulting and Clinical Psychology, 43*(1), 56-67. doi:10.1037/h0076301

Ruble, L. A., Usher, E. L., & McGrew, J. H. (2011). Preliminary investigation of the sources of self-efficacy among teachers of students with autism. *Focus on Autism & Other Developmental Disabilities, 26*(2), 67-74. doi:10.1177/1088357610397345

Ruttle, P. L., Shirtcliff, E. A., Serbin, L. A., Ben-Dat Fisher, D., Stack, D. M., & Schwartzman, A. E. (2011). Disentangling psychobiological mechanisms underlying internalizing and externalizing behaviors in youth: Longitudinal and concurrent associations with cortisol. *Hormones and Behavior, 59*(1), 123-132. doi:10.1016/j.yhbeh.2010.10.015

Schonert-Reichl, K., & Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre- and early adolescents' well-being and social and emotional competence. *Mindfulness, 1*(3), 137-151. doi:10.1007/s12671-010-0011-8

Schonert-Reichl, K., Oberie, E., Stewart Lawlor, M., Abbott, D., Thomson, K., Oberlander, T. F., & Diamond, A. (2015). Enhancing cognitive and social-emotional development through a simple-to-administer mindfulness-based school program for elementary school children: A randomized controlled trial. *Developmental Psychology, 51*(1), 52-66. doi:10.1037/a0038454

Schutt, R. K. (2012). *Investigating the social world: The process and practice of research* (7th ed). Thousand Oaks, CA: Sage Publications.

Segerstrom, S. C., & O'Connor, D. B. (2012). Stress, health and illness: Four challenges for the future. *Psychology & Health, 27*(2), 128-140. doi:10.1080/08870446.2012.659516

Siemer, M., Mauss, I., & Gross, J. J. (2007). Same situation--different emotions: How appraisals shape our emotions. *Emotion, 7*(3), 592-600. doi:10.1037/1528-3542.7.3.592

Soriano, F. I. (2013). *Conducting needs assessments: A multidisciplinary approach.* Washington, DC: Sage.

The Hawn Foundation. (2011) *The MindUp curriculum: Brain-focused strategies for learning-and living*. New York: Scholastic.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805. doi: 10.1016/S0742-051X(01)00036-1

Tschannen-Moran, M., & Wolfolk Hoy, A. (2015). *Survey instruments to help you in your investigations of schools*. Retrieved from: http://mxtsch.people.wm.edu/research_tools.php

Ware, H., & Kitsantas, A. (2007). Teacher and collective efficacy beliefs as predictors of professional commitment. *Journal of Educational Research, 100*(5), 303-310. doi: 10.3200/JOER.100.5.303-310

Watlington, E., Shockley, R., Guglielmino, P., & Felsher, R. (2010). The high cost of leaving: An analysis of the cost of teacher turnover. *Journal of Education Finance,36*(1), 22-37. doi:http://www.press.uillinois.edu/journals/jef.html

Watson, J. C., Harper, S., Ratliff, L., & Singleton, S. (2010). Holistic wellness and perceived stress: Predicting job satisfaction among beginning teachers. *Research in the Schools, 17*(1), 29-37. Retrieved from Education Source. (Accession No. 55435495)

Wolters, C. A., & Daugherty, S. G. (2007). Goal structures and teachers' sense of efficacy: Their relation and association to teaching experience and academic level. *Journal of Educational Psychology, 99*(1), 181-193. doi: 10.1037/0022-0663.99.1.181

APPENDIX A. NEEDS ASSESSSMENT: QUESTIONS

Understanding Teacher Stress

Final Questions

18. Please rate your overall stress level.

Not Stressed		Slightly Stressed		Somewhat Stressed		Moderately Stressed		Very Stressed
1	2	3	4	5	6	7	8	9
○	○	○	○	○	○	○	○	○

19. What are your top three stressors at work?

20. What are the top three ways that you manage stress at work?

21. What are the top three ways that you manage stress outside of work?

22. Are you able to effectively meet all of your students' needs (academic, social, and behavioral)?

Unable		Slightly Able		Somewhat Able		Moderately Able		Very Able
1	2	3	4	5	6	7	8	9
○	○	○	○	○	○	○	○	○

100%

Prev Done

APPENDIX B. NEEDS ASSESSSMENT: SAMPLE EMAILS

Sample Introduction Email to Participants from Needs Assessment Study

Good morning,
I hope you are well. I am a teacher at Auburn, Baltimore and a graduate student at Johns Hopkins University. I am collecting preliminary data for my dissertation. My goal is to better understand teachers' experience of stress. Therefore, your willingness to take time out of your busy day to respond to my attached survey would be much appreciated. It is your response that will help me to develop an intervention for Auburn to use in order to better support teacher well-being and promote long-term meaningful practice. **Your answers to the survey are absolutely confidential and your individual responses will not be shared with anyone.**

As we quickly approach spring break, I am asking that you complete this survey by **Friday, April 3, 2015**. I would be so grateful if you would consider participating. You can click on the link below to take the survey; it will most likely take 15-20 minutes to complete. Please email me or call me (301) 667-8186 if you have any questions. **Thank you, thank you, thank you** for your support.

Warm regards,
Caitlin

Sample Follow-Up Reminder Email from Needs Assessment Study

Good morning,
Happy almost spring break! I wanted to send out a reminder to complete the attached survey if you haven't already by Friday, April 3, 2015. I realize that the days leading up to break are always crazy and understand that it is asking a lot in a short period of time. I also really value your opinions and input. I am not able to tell who completes the survey so please disregard this email if you have already completed it. Thank you again for your tremendous support!
Caitlin

APPENDIX C. TABLES

Table C1

Evaluation of Study Quality from Literature Review

	Benn et al., (2012)	Flook et al., (2013)	Jennings et al., (2013)	Roeser et al. (2013)	Schonert-Reichl & Lawlor (2010)	Schonert-Reichl et al., (2015)
Essential Quality Indicators						
Participants						
Clear description, including difficulties experienced	1	1	1	1	1	1
Characteristics comparable across conditions (sample)	1	1	1	1	1	2
Characteristics comparable across conditions (interventionists)	1	1	1	1	1	1
Implementation						
Procedures clear	1	1	1	1	1	1
Fidelity described and assessed	1	1	1	1	1	1
Services in comparison condition detailed	1	2	2	1	2	1
Outcome Measures						
Multiple measures; aligned with intervention; generalized performance	1	1	1	1	1	1
Effect measured at appropriate times	1	1	1	1	1	1
Data Analysis						
Techniques consistent with questions/hypotheses and unit of analysis	1	1	1	1	1	1
Inferential statistics and effect size calculations reported	1	1	1	1	1	1
Desirable Quality Indicators						
Attrition rates reported (comparable across samples and less than 30%)	2	1	1	1	1	1
Internal consistency and reliability; inter-rater reliability (when appropriate); collectors and/or scorers blind to study conditions	2	1	1	2	2	1
Intervention effect measured beyond immediate posttest	1	1	2	1	2	2
Criterion-related and construct validity provided	2	2	2	2	2	2
Thorough examination of quality of implementation	1	1	1	1	1	1
Nature of instruction or series provided (comparison conditions)	1	2	1	1	1	1
Audio or videotape excerpts (research report)	2	2	2	2	2	2
Results presented in a clear, coherent fashion	1	1	1	1	1	1

Note. Quality Indicators informed by the research of Gersten et al. (2005). Indicators scored with a "1" signal that the study met established criteria, whereas ratings of "2" suggest that the study did not meet established criteria.

Table C2

Summary of Studies from Literature Review

Citation	Purpose	Setting; Participants	Method	Measures	Procedures	Findings
Benn, Akiva, Arel, & Roeser (2012)	To assess the effect of mindfulness practice as a means to reduce stress and promote positive teaching behaviors (e.g., building meaningful and positive relationships with students.	Urban; Midwestern U.S.; 72 participants (32 parents; 38 teachers). The majority of participants were involved in a summer extension program for students with special needs. Overall attrition was approximately 40%.	Randomized waitlist- control design. Surveys administered at three time points (baseline; post-program; 2-month follow-up).	Mindfulness (Five Facet Mindfulness Questionnaire); Stress (Perceived Stress Scale); Anxiety (State sub scale of State-Trait Anxiety Inventory); Depression (Center for Epidemiological Studies Depression Scale) Positive and Negative Affect (Positive and Negative Affect Schedule); Personal Growth: (One of Six Factors of Psychological Well-Being Scale); Self-Compassion (Self-Compassion Scale); Forgiveness(Questionnaire); Empathetic Concern (sub scale of Interpersonal Reactivity Index); Self-efficacy (Self-Efficacy Scale).	The professional development program utilized the SMART-in-Education (Stress Management and Relaxation Techniques), which included 36 hours of lecture; group discussion; activities; practices; and homework. The professional development occurred across nine, two and a half hour sessions, along with two full days, over a five-week period.	An increase in mindfulness mediated decreased stress, anxiety, and negative affect among participants after the intervention period. Following the intervention, participant self-compassion, personal growth, empathy, and willingness to forgive others also increased. Educators were able to develop self-efficacy beliefs related to teaching through mindfulness training.

Table C2 Continued

Summary of Studies from Literature Review

Citation	Purpose	Setting; Participants	Method	Measures	Procedures	Findings
Flook, Goldberg, Pinger, Bonus, and Davidson (2013)	To examine the relationship between the delivery of Mindfulness-Based Stress Reduction (MBSR) and teacher instructional practice, attention, emotion, and stress.	Teachers from four low-income public schools in a midwestern city in the United States; 18 teachers participated in the intervention.	Participants were randomized to a treatment group or waitlist control group. Pre- and post- tests were conducted along with follow-up one-month post intervention. Mixed methodology was employed (self-report and objective measurements).	Measures assessed psychological distress (Symptom Checklist 90-R); mindfulness (Five-Facet Mindfulness Scale); Self-Compassion (Self-Compassion Scale); Burnout (The Maslach Burnout Inventory-Educators Survey); Teacher Classroom Behavior (The Classroom Assessment Scoring System); Cortisol Measurement; Neuropsychological and Attentional Tasks; Mindfulness Practice Compliance.	Participants in the intervention group, over the course of 8 weeks, attended twenty-six hours of formal mindfulness training. They also were asked to engage in informal practice at work and/or at home and to keep a written record of their practice.	Mindfulness training led to increased teacher awareness and positive outcomes related to instructional practice, attention and emotional regulation, and decreased stress and burnout among teachers. As teachers gained awareness through consistent mindfulness practice, they also gained self-compassion.

Table C2 Continued

Summary of Studies from Literature Review

Citation	Purpose	Setting; Participants	Method	Measures	Procedures	Findings
Jennings, Frank, Snowberg, Coccia, & Greenberg (2013)	To assess the impact of a mindfulness-based professional development program, Cultivating Awareness and Resilience in Education (CARE), on teacher outcomes in terms of promoting teacher well-being, mindfulness, and overall efficacy, as well as perception of teacher-student relationships and student behavior.	Teachers and specialists from public schools across two districts (urban and suburban) in the northeastern part of the U.S. 56 participants were recruited, with a 5.6% attrition rate. The sample included: general education teachers (33), special education teachers (8), specialists, such as speech-language pathologists (6); specials teachers (e.g., art) (3). Almost half of all teachers taught at the elementary level. Because the majority of teachers taught in elementary or middle school (n = 3), the study met inclusion criteria. It should be noted that a couple of teachers (n = 3) taught at the pre-school level and (n = 6) high school level. Sixteen teachers taught mixed grades.	Randomized wait-list control trial. Pre- and post test surveys administered. Self-report measures.	Well-being (Positive and Negative Affect Schedules; Emotion Regulation Questionnaire; The Center for Epidemiological Studies Depression Scale; The Daily Physical Symptoms). Efficacy (Teachers' Sense of Efficacy Questionnaire). Burnout and time pressure (Maslach Burnout Inventory- Educators' Survey; The Time Urgency Scale). Mindfulness (The Five Facet Mindfulness Questionnaire). Program evaluation.	The program consists of four full-day sessions across four-six weeks, lasting thirty hours. A coaching phone call occurred between sessions to provide support with mindfulness training at home and a follow-up professional development session was provided.	After completing the program, teachers reported increased well-being related to ability to reappraise situations and daily physical symptoms. Teachers self-efficacy increased related to student engagement and instruction but not classroom management. Teachers showed significant improvement related to the Personal accomplishment scale of the Maslach Burnout Inventory, as well as time pressure. Finally, significant effects were observed for the Observe, Nonreact, and overall mindfulness portions of the Mindfulness measure. The majority of teachers rated the program with high regard.

Table C2 Continued

Summary of Studies from Literature Review

Citation	Purpose	Setting; Participants	Method	Measures	Procedures	Findings
Roeser, Schonert-Reichl, Jha, Cullen, Wallace, Wilensky, Thomson, Taylor, & Harrison (2013)	To assess the effects of a professional development focused on mindfulness practice to reduce teacher stress.	Urban and suburban public schools; general education; Western Canada and Western United States; 58 teachers (52 women), 50% elementary; U.S. Sample: 55 teachers (48 women), 51% elementary. Sample combined (N = 113). 52 of 60 participants completed PD.	Randomized waitlist-control field trials; teachers volunteered across both sites; baseline assessments administered to all participants (teachers compensated for time spent taking assessments); 3 assessment points (baseline; post-program; 3-month follow-up). Survey assessing stress, burnout, and wellbeing (self-report data) administered across all 3 time points; blood pressure and pulse assessed at baseline and post-program; evaluation of program (post); mindfulness journals collected (post); Canadian sample also completed computer task, cortisol samples, and semi-structured interviews.	Mindfulness: Five-Factor Mindfulness Questionnaire; Attention: Operation Span Task [Ospan]; Self-compassion: Neff's global self-compassion (modified); 7 items assessing stress; Burnout: Maslach Burnout Inventory; Anxiety & Depression: State sub scale of the State-Trait Anxiety Inventory (STAI); Absences from work;	Professional development was comprised of 11 after-school sessions, meeting over the course of 8 weeks. Activities were designed to not only teach teachers about mindfulness practice, but also to provide relevant and meaningful opportunities for practice. Teachers were provided with activities to reinforce concepts learned in each session as homework and were meant to encourage and support one another throughout the course of PD.	Results indicate large effect sizes related to mindfulness and occupational self-compassion for participants within the treatment group when compared with control group, and continued at 3-month follow-up. Maintenance of effect was more substantial for teachers in the U.S. sample. Small effect size was shown related to attention/working memory for those teachers in the treatment condition (Canadian sample). Large effect related to reduction in burnout symptoms and occupational stress among treatment group at follow-up found when compared with control (even more so in U.S. sample). Small effects shown related to absenteeism (treatment versus control). Large effect size for decreased anxiety and depression symptoms (U.S. sample). Small effects related to reduction in cortisol found (Canadian sample). No effect found related to blood pressure and pulse. MT and self-compassion shown at follow-up to be significant mediating variables related to burnout, stress, anxiety, and depression.

Table C2 Continued

Summary of Studies from Literature Review

Citation	Purpose	Setting; Participants	Method	Measures	Procedures	Findings
Schonert-Reichl& Lawlor (2010)	To evaluate the effects of a classroom-based mindfulness program on the development of student social emotional competencies (i.e., optimism and positive affect).	Public school; general education; 12 elementary schools; same urban district in western Canada. 246 4th and 7th grade students; teacher participation voluntary; 6 teachers and classrooms in wait-list control (*n* = 107, 57 boys; 50 girls) and 6 in treatment (*n* = 138, 70 boys; 69 girls). 82% of student participants (and their parents) signed informed consent forms.	Quasi experimental group design. Pre- and Post Questionnaire; Teachers in the control group completed a fidelity checklist daily; Evaluation form of program provided to teachers as well.	Optimism: Resiliency Inventory; School and general self-concept: Self-description questionnaire; Positive and negative emotions: Positive and Negative Affect Schedule; Teacher Reports of Social and Emotional Competence; Teachers' Rating Scale of Social Competence (for each student at pre- and post- test). Teacher perceptions of program rated using a Likert scale. As mentioned fidelity data taken on implementation of core mindfulness practices, as well as implementation of lesson components. Open-ended questions asked on evaluation.	All children in the class participated in ten teacher-led lessons with cross-curricular and real-life connections; Core mindfulness practice is a big part of the curriculum. (3x per day for 3 minutes each time).	Program lesson components were implement 75% of the time by teachers. Teachers implemented the core practice at an average of 87% of the time. Teachers evaluated the program with high regard. The benefits of the program to not only the individual learner but the class as whole were expressed qualitatively. Students in the treatment group significantly increased levels of optimism and data showed a trend in the positive direction for positive affect. When compared with pre-adolescent participants in the control group, pre-adolescents (versus early adolescents) in the treatment group articulated improved self-concept. Teacher ratings of student social emotional competencies showed student improvement for students in treatment group.

Table C2 Continued

Summary of Studies from Literature Review

Citation	Purpose	Setting; Participants	Method	Measures	Procedures	Findings
Schonert-Reichl, Oberin, Lawlor, Abbott, Thomson, Oberlander, & Diamond (2015)	To determine the effects of a classroom-based mindfulness program, MindUP, on student social emotional competencies.	Public school district; suburban; middle-class; western Canada; 4 elementary schools; Ninety-nine 4th and 5th grade students were recruited with 98% of parents consenting.	Randomized control trial study; only one classroom from each of the four schools was eligible for participation. Two classrooms served as control, two as treatment.	cortisol samples at pre- and posttest; teacher measures of achievement in math; EF computer tasks; surveys; self-report and behavioral assessments; teacher-completed surveys which included a question about lesson components utilized; daily tracking of core practices; EF: Flanker Task and Hearts and Flowers version of dots task; Empathy and perspective taking: Interpersonal Reactivity Index; Optimism and emotional control: sub scales of resiliency inventory; school self-concept: Marsh's self-description questionnaire; depressive symptoms: Seattle personality questionnaire for children; mindfulness; Mindful Attention Awareness Scale for children; Social responsibility: sub scale of Social Goals Questionnaire.	The classroom-based mindfulness program consisted of twelve lessons (approximately one 40-50-minute lesson taught per week). Students were also participated in a guided mindfulness practice three times a day for three minutes each time.	High fidelity of implementation (100% of lessons) and 81 and 95% of core practices (2 teachers); Findings of their study indicate that children in the intervention group who received instruction based on the MindUP curriculum demonstrated gains in executive functioning, overall well-being, and aspects of social and cognitive wellness

APPENDIX D. SAMPLE STUDENT POINT SHEET

MONDAY

The Auburn School

Name: _____ Date: _____

Periods	Safety	Respect	Responsibility	Homework
Morning Routine/Meeting				Partially Completed= 1 point
Social Learning				
Math				
Snack/Break				
LA				**My** Mostly completed= 2 points
SS				
Lunch				
Recess				
DEAR/PE				**My** Best complete work= 3 points
DEAR/Science				
Closing Routine				

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

Leveling Down

Level Stay

Level Up

APPENDIX E. SATISFACTION SURVEY

Evaluating MindUP

16. Please rate the quality of the MindUP program.

	Poor	Fair	Good	Very Good	Excellent
Lessons for students.	○	○	○	○	○
The "core practice" of daily mindfulness for teachers and students.	○	○	○	○	○
The "once a day" challenges.	○	○	○	○	○
Optional supplementary activities.	○	○	○	○	○
The program overall.	○	○	○	○	○

17. How likely are you to recommend the MindUP program to a colleague?

18. Rate the mindfulness practice completed through the MindUP program as a strategy.

	Not Helpful	Fairly Helpful	Somewhat Helpful	Very Helpful	Extremely Helpful
For the school overall.	○	○	○	○	○
For my classroom.	○	○	○	○	○
For my students.	○	○	○	○	○
For me.	○	○	○	○	○

19. How likely are you to continue to practice mindfulness within your classroom?

20. Were there any factors that made it difficult for you, your students, or your classroom overall to benefit from regular mindfulness practice?

APPENDIX F. FOLLOW-UP SURVEY

1. Rate mindfulness practice as a strategy.

	Not Beneficial	Fairly Beneficial	Somewhat Beneficial	Very Beneficial	Extremely Beneficial
For the school overall.	○	○	○	○	○
For my classroom.	○	○	○	○	○
For my students.	○	○	○	○	○
For me.	○	○	○	○	○

2. Over the past four weeks have you continued to use MindUP's "core practice" with students?

- ○ yes
- ○ no

3. If you have continued the "core practice" with students, how often do you lead or participate in leading that practice?

- ○ Every once in a while
- ○ Weekly
- ○ Daily
- ○ More than once a day

4. Please describe how the "core practice" or mindfulness in general has supported your classroom.

5. Have you continued to integrate mindfulness into your classroom in any other ways? if so, how?

6. Please describe any positive personal benefits of using mindfulness throughout your work day?

7. Do you see any long-term benefits of the MindUP program?

8. Please describe any challenges to integrating mindfulness throughout the school/work day?

APPENDIX G. PARTICIPANT FIDELITY CHECKLIST

Sample Fidelity Checklist: Week _____

Directions: Check each activity that was completed in the classroom where you work and indicate the day it was completed. Please note that you should only check off the "once a day" challenge if **you** completed it. It is strongly encouraged that you complete the highlighted boxes.

Completed	Monday	Tuesday	Wednesday	Thursday	Friday
"Once a Day" Challenge					
"Connections" Journal Writing					
"Connections" Science					
"Connections" Language Arts					
"Connections" Physical Education					
"Connections" Literature Link					
"Connections" Social-Emotional Learning					
Core Practice #1					
Core Practice #2					
Core Practice #3					
Did the teaching team lead any additional Core Practices today?					

APPENDIX H. RESEARCHER FIDELITY CHECKLIST

Fidelity Checklist: Week _____

Directions: Check off the parts of the lesson that were completed below.

Classroom 1 Lesson ___	Monday	Tuesday	Wednesday	Thursday	Friday
Warm-up					
Engage					
Explore					
Reflect					
Extend: MindUP in the real world					

Additional Notes:

Classroom 2 Lesson ___	Monday	Tuesday	Wednesday	Thursday	Friday
Warm-up					
Engage					
Explore					
Reflect					
Extend: MindUP in the real world					

Additional Notes:

Classroom 3 Lesson ___	Monday	Tuesday	Wednesday	Thursday	Friday
Warm-up					
Engage					
Explore					
Reflect					
Extend: MindUP in the real world					

Additional Notes:

Classroom 4 Lesson ___	Monday	Tuesday	Wednesday	Thursday	Friday
Warm-up					
Engage					
Explore					
Reflect					
Extend: MindUP in the real world					

Additional Notes:

Classroom 5 Lesson ___	Monday	Tuesday	Wednesday	Thursday	Friday
Warm-up					
Engage					
Explore					
Reflect					
Extend: MindUP in the real world					

Additional Notes:

Meeting Schedule

Lesson ___	Monday	Tuesday	Wednesday	Thursday	Friday
TT 1					
TT 2					
TT 3					
TT 4					
TT 5					

Additional Notes:

APPENDIX I. OBSERVATION CHECKLIST

Question	What to Look For	Yes/No (Check indicates yes).
Did the teacher **prepare** students for the core practice?	Students are asked to sit upright and comfortably at their desks, feet flat on the floor OR students are asked to sit in a circle on the floor, cross-legged.	
	The teacher previews the Core Practice with students by reminding them that we are going to: • Close our eyes or look into our hands. • When we hear the instrument, we should listen as long as we can. • When the sound has faded, we begin to focus on every breath as we take it in and let it out. • When we hear the sound the second time, we will listen as long and as carefully as we can, still breathing calmly. • When you can't hear the sound any long, slowly open your eyes, but remain still and quite.	
	The teacher ensures that everyone understands what to do.	
Did the teacher **lead** the core practice effectively?	• Using a designated instrument, the teacher plays a note. Pauses for at least 10 seconds after the sound has stopped, for mindful breathing. • The note is then played again, teachers and students listen for as long and as carefully as they can, while breathing calmly. When they can't hear the sound any longer they slowly open their eyes. • Teachers and students remain still and quiet for a moment.	
Did the teacher briefly **reflect** with students?	• The teacher asks students to share their experiences with the core practice, models his or her own experience, and/or praises students by giving them specific feedback.	
Overall, did the teacher **engage** students?	• The teacher seemed to have a positive attitude about the core practice. • The teacher spoke in a calm voice and waited for students to show that they were physically prepared before beginning.	
Did all teachers in the classroom **participate**?	• Did it seem as though all teachers in the classroom took the practice seriously and participated alongside students?	

APPENDIX J. SAMPLE EMAIL TO PARTICIPANTS

Good morning,

Thank you for attending the information session and expressing interest in participating in a study to benefit teachers. Your willingness to take time out of your busy day to respond to the attached survey is much appreciated. **Your answers to the survey are absolutely confidential and individual responses will not be shared with anyone.**

As we begin this school year, I am asking that you complete this survey by **Thursday, September 15, 2016**. You can click on the link below to take the survey; it will most likely take 15-20 minutes to complete. Please email me or call me (301) 667-8186 if you have any questions. **Thank you, thank you, thank you** for your support.

Warm regards,

Caitlin

APPENDIX K. GENERAL QUESTIONS: COMPARISON

16. So far this school year, have you practiced mindfulness with your students?

- ◯ Yes
- ◯ No

17. If you practice mindfulness with your students, about how often do you lead that practice?

- ◯ Once a month or less
- ◯ A few times a month
- ◯ Once a week
- ◯ A few times a week
- ◯ Every day
- ◯ Other (please specify)

18. If you practice mindfulness with your students, describe what that practice looks like.

19. If you practice mindfulness with your students, have you used any curriculums to guide that practice?

APPENDIX L. QUALITATIVE DATA TABLES

Table L1

Post- Satisfaction Survey Responses to Open-ended Question Items

Question	Very Likely or Highly Recommend *N* (%)	Likely or Recommend *N* (%)
How likely are you to recommend the MindUP program to a colleague?	"I would be very likely to recommend this program and use it in the future." (14.23%)	"Likely that they should look into it." (14.23%)
	"Very likely" (42.86%)	"I would recommend the MindUp program to colleagues because the "core practice" is a great technique for students to feel relaxed, as well as teachers. I also believe the lessons and journal prompts are very easy to implement into the classroom." (14.23%)
	"I would highly recommend it. I think it was beneficial to students and teachers." (14.23%)	
How likely are you to continue to practice mindfulness in your classroom?	"Very likely" (25%)	"I will continue to use the core practice at least once per day. I also use a variety of other breathing/ stretching/ movement activities that I think benefit the students as well." (12.5%)
	"Highly likely" (12.5%)	I will continue doing the core practice at least two or three times a day. I will also continue to use journal prompts and curriculum connections when appropriate." (12.5%)
	"I would very much like to continue the practice." (12.5%)	"We still try to do it at least once a day." (12.5%)
		"Likely." (12.5%)

Table L2

Integration of Mindfulness Content into the Classroom at Follow-up

Question	Yes	No
Have you continued to integrate mindfulness into your classroom in any other ways? If so, how?	"We continue to use some of the journal prompts in our classroom relating to mindfulness." "Yes, we continue to use the metacognitive language and identify mindful practices with positive praise." "We have continued doing the core practice and mindfulness comes up during conversations and reflections at time." "Random breathing or stretching activities when needed." "I have continued to use the language. We also use deep breathing and intentional movements daily in other ways besides core practice. I really like the language "mindful/unmindful choice."	"No"

Table L3

Post-assessment and Follow-up Challenges to Implementation

Question	Student Behavior/Concerns	Time-related Concerns
Post-assessment: Were there any factors that made it difficult for you, your students, or your classroom overall to benefit from regular mindfulness practice?	"I found it difficult to focus on being mindful while leading the activity since I was counting the 10 second pause, monitoring student behaviors etc. That said, pausing to breathe and take time to relax was helpful. I noticed that the strategy helped some students a lot. Others seemed very tired and lethargic afterwards rather than focused. These are students that may have needed alerting rather than calming activities."	"Changes in daily schedule and sudden student needs, but overall, not hard to maintain."
	"Changes in daily schedule and sudden student needs, but overall, not hard to maintain."	"It was sometimes hard to find the time as the day progressed. It was easier in the morning."
	"Sometimes it was harder for the younger one but overall they would get the gist of it."	"3x daily was sometimes a struggle, especially on half days and noise in the hallway or class next door while we were doing our core practice."
		"Time constraints. Fitting it in throughout busy days / classes consistently."
		"Occasionally, there was not enough time in the day to complete all three core practices."

Table L3 Continued

Post-assessment and Follow-up Challenges to Implementation

Question	Student Behavior/Concerns	Time-related Concerns
Follow-up: Please describe any challenges to integrating mindfulness throughout the school/work day?	"Keeping the students motivated to do core practices."	"Some challenges are that the "core practice" is hard to implement three times a day and that it might be rushed because there are so many other tasks to be completed throughout the day."
	"3x/day was a lot for our classroom since we already use other movement/ mindfulness activities. I had some students who were more resistant to the process than others."	"There were many options to extend mindfulness each week but too little time to integrate as many as I would have liked."
	"It can sometimes be difficult to have all students buy in to the practice, and for those who enjoy it, that can be a big frustration (though also a good opportunity to remind them that this practice is for themselves and that tuning out others' noises is part of the process)."	"The school days get busy and staff often have their attention pulled in several different places at the same time (i.e. by colleagues, students, preparing materials for lessons, paperwork, etc.). However, the core mindfulness practice remains very helpful to the classroom community."
		"We use it a couple of times a week now and would probably benefit even more from doing it more often.
		Making time to implement the core practice in our busy schedule."
		"Multiple times per day was sometimes difficult to maintain. It was also challenging to focus on the sound of the bell when there was noise in neighboring classrooms or in the hallway."
		"3x/day was a lot for our classroom since we already use other movement/ mindfulness activities. I had some students who were more resistant to the process than others."

Table L4

Program Benefits Reported at Follow-up

Question	Transition/Recalibration for Students	Classroom Community
Please describe how the "core practice" or mindfulness in general has supported your classroom.	"The "core practice" has helped students relax and focus on their breathing throughout the day. It has also been a great way to students transition between activities or help them be calm when they might be feeling overwhelmed or frustrated."	"It helps to create a common language for all the students and adults in the room. Promotes positive classroom culture."
	"Students have a practice to anchor certain points in their day, and it truly feels like a recalibration after a lot of activity."	"It's been a really great time for all of us to look forward to each morning and afternoon. A quiet time to just breathe and let our minds be still. They also look forward to it each day and will remind teachers if we haven't gotten to do it yet."
	"Its a good time for my students to come together, re group before we start different activities."	
	"It helps to "reset" the classroom, to help students refocus when they're either too tired or excited so that they can continue to be successful academically and socially."	
	"Students have responded very well to it and they often request the singing bowl. It helps the students return to a positive and productive place."	
	"It has helped regroup the kids if they are starting to get really wiggly or silly. It is also helpful if we do it at the end of morning meeting to set the tone for the day."	
	"It helps to create a common language for all the students and adults in the room. Promotes positive classroom culture."	

Table L4 Continued

Program Benefits Reported at Follow-up

Question	Awareness, Reflection, and Relaxation	Classroom Community
Please describe any positive personal benefits of using mindfulness throughout your work day?	"It helps me to be more aware of my colleagues needs and milestones, because I'm paying closer attention. This awareness is helping build more collaborative relationships." "I use the core practices to reflect on how the day is going, and taking the time to really listen to myself and what needs to be done next in nice and calming manner." "It is calming and it gives students and teachers time to re-group and refocus." "The "core practice" can be a moment of pause and reflection for myself as well. A "reset" for me too."	"It has provided a positive energy in the classroom where students take a few minutes and relax in a quiet, peaceful way." "It is a great opportunity and excuse to take a moment to breathe deeply with the kids. I have also been more open about telling the kids when I feel anxious/ frustrated etc. (in a kid appropriate way) when the classroom is loud or students aren't reading my plan. I think that this is helpful because it can be more powerful and help the kids perspective take." "It's a great way to start off the day with students, all on the same, relaxed page. Likewise, in the afternoon, after things have possibly gotten stressful, it's a time to breathe through it and let the passed stresses go."

Table L4 Continued

Program Benefits Reported at Follow-up

Question	Tool for the Classroom and/or Students
Do you see any long-term benefits of the MindUP program?	"Yes, it provides students with another strategy to use when they might be feeling frustrated. It is also a good tool for them to use to relax." "It helps to "reset" the classroom, to help students refocus when they're either too tired or excited so that they can continue to be successful academically and socially. The "core practice" can be a moment of pause and reflection for myself as well. A "reset" for me too." "It gives the students a heightened awareness of their senses as well as the ability to recognize times to stop and meditate -- just to focus on their breathing and surrounding environment." "Yes, I think its a great way to get teachers and students to get those brain breaks in and reflect on how they are feeling and acting." "I think it has been an opportunity for students to slow down and think things through a bit more thoroughly, which has been really nice." "The students responded well to the program. I think by the end of the year we might see some of the long term benefits." "Yes, I think there is a long term benefit to this program. I like that it creates a positive classroom and school culture. I like the language that it provides. I think that some students were more aware in some ways after the program." "Very distinct and simple practices to integrate throughout the day and within curricular units. It's a great to help parents extend mindful practices at home."

BIOGRAPHICAL STATEMENT

Caitlin Gosnell serves as a part-time adjunct faculty member for Loyola University. Prior to her employment with Loyola, she was a founding teacher for The Auburn School in Baltimore, Maryland and later served as the school's Dean of Students and Social Learning Specialist. Caitlin has also worked as a special educator at The Forbush School at Hunt Valley, affiliated with Sheppard Pratt Health Systems. Caitlin is a graduate of Shepherd University where she received her Bachelor of Arts in history. She also earned her Master of Arts in Teaching with a concentration in special education from Goucher College. She resides in Owings Mills, Maryland with her husband, two sons, and dog.